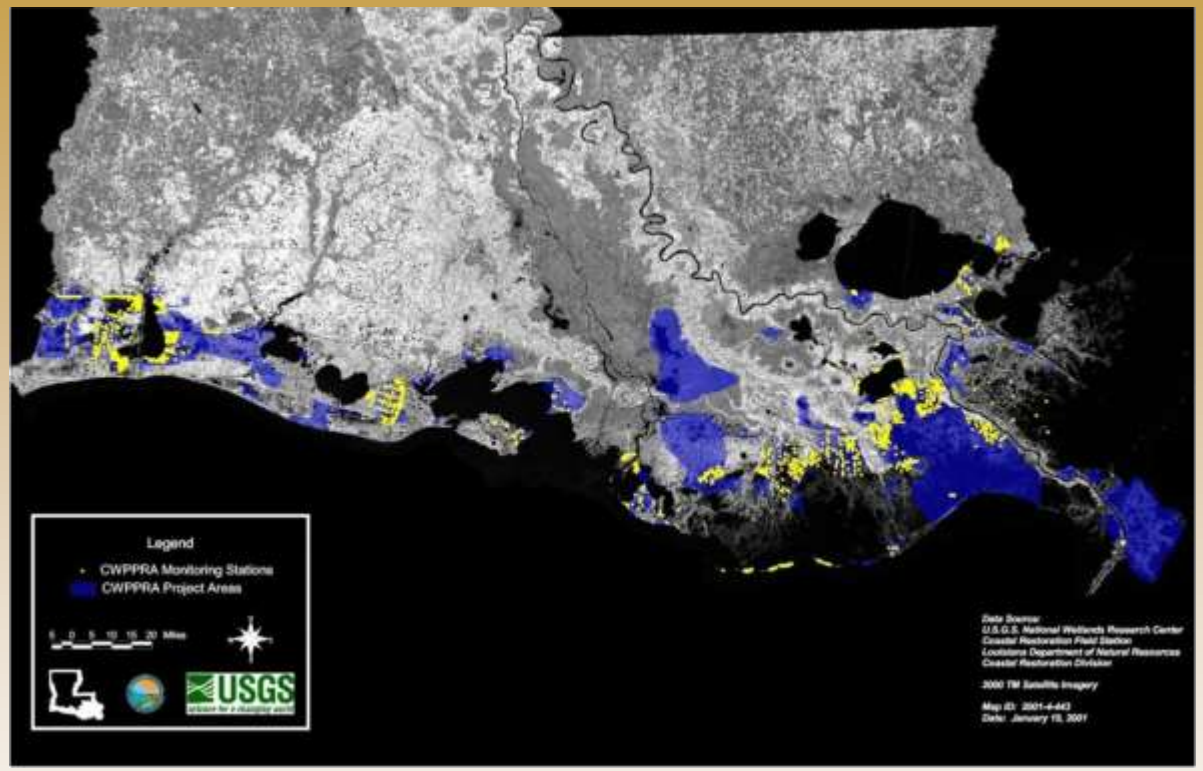
CRMS Website Training

October 2014

http://www.lacoast.gov/crms



Restoration project types: diversions of freshwater and sediments, marsh creation, shoreline protection, sediment and nutrient trapping, hydrologic restoration, and vegetation planting

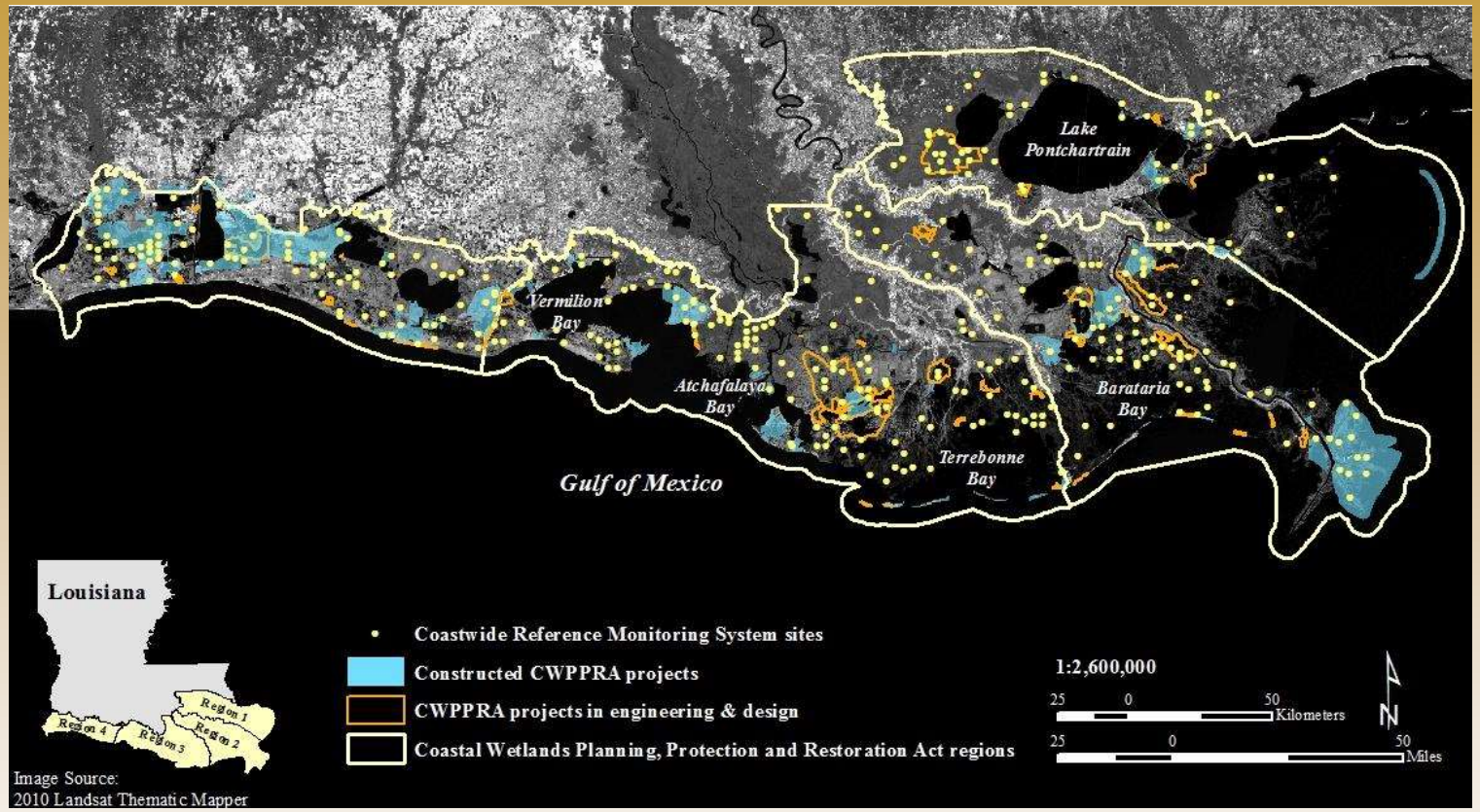
- CWPPRA was congressionally funded in 1990 and mandated 20 years of restoration project monitoring

- CWPPRA program uses multiple restoration techniques
  - size and types of projects vary

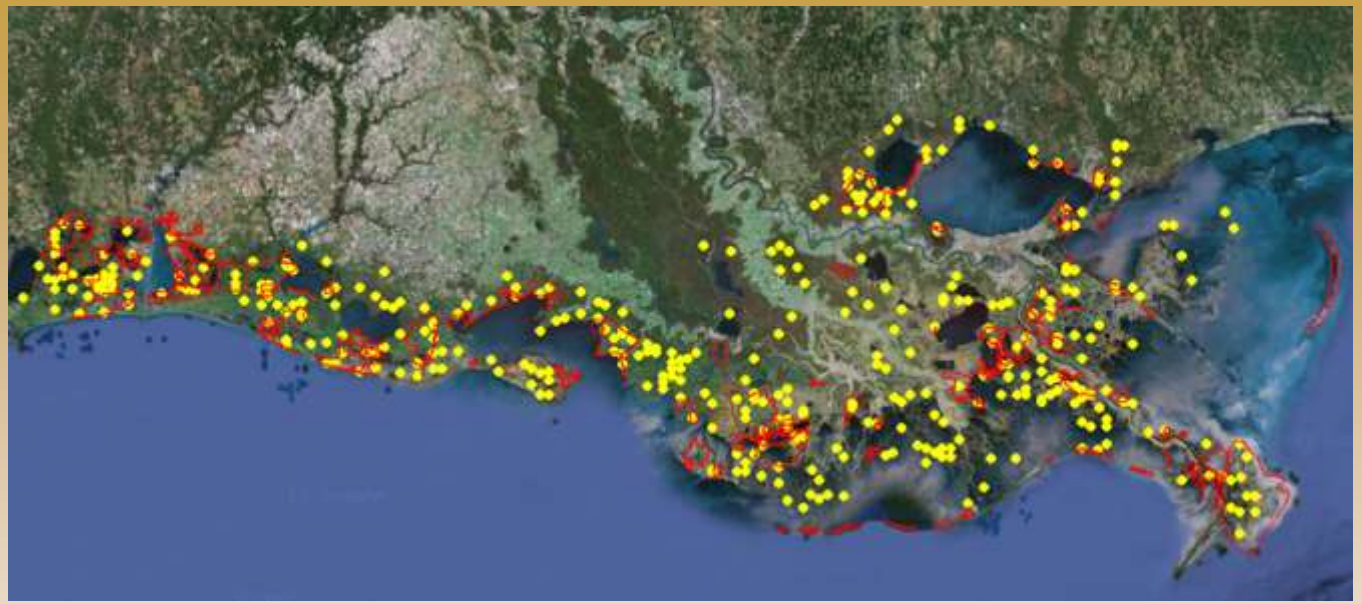
- Initially the program used paired project and reference sites
  - with time, difficult to find “uninfluenced” reference

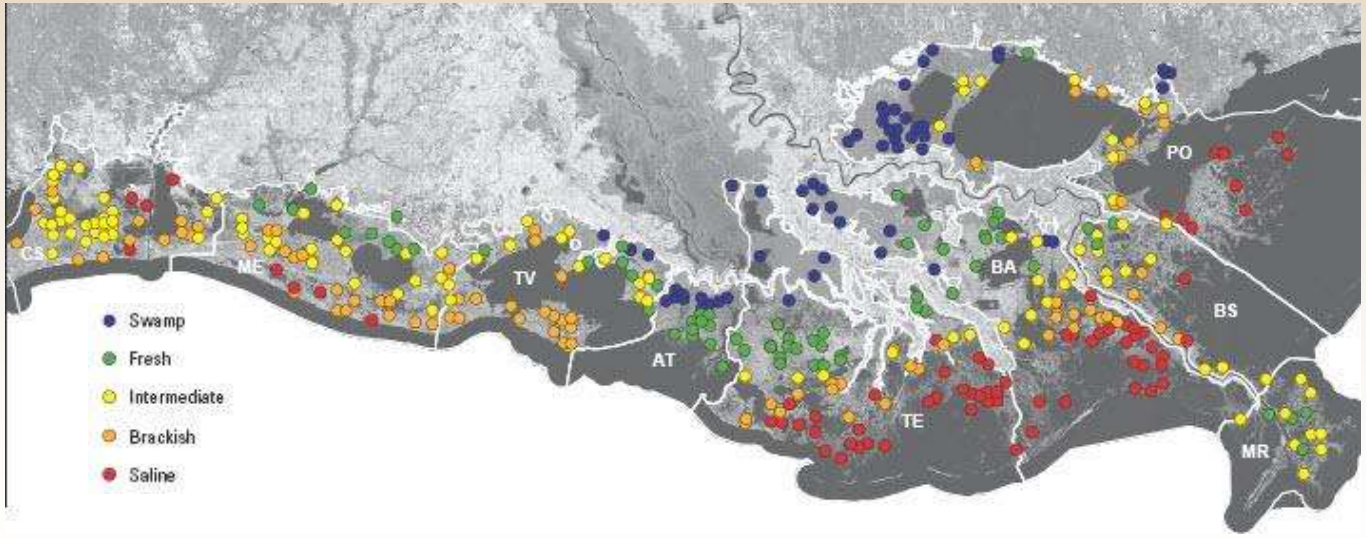
- Inconsistent monitoring variables and collection frequencies across projects with short data records

Purpose

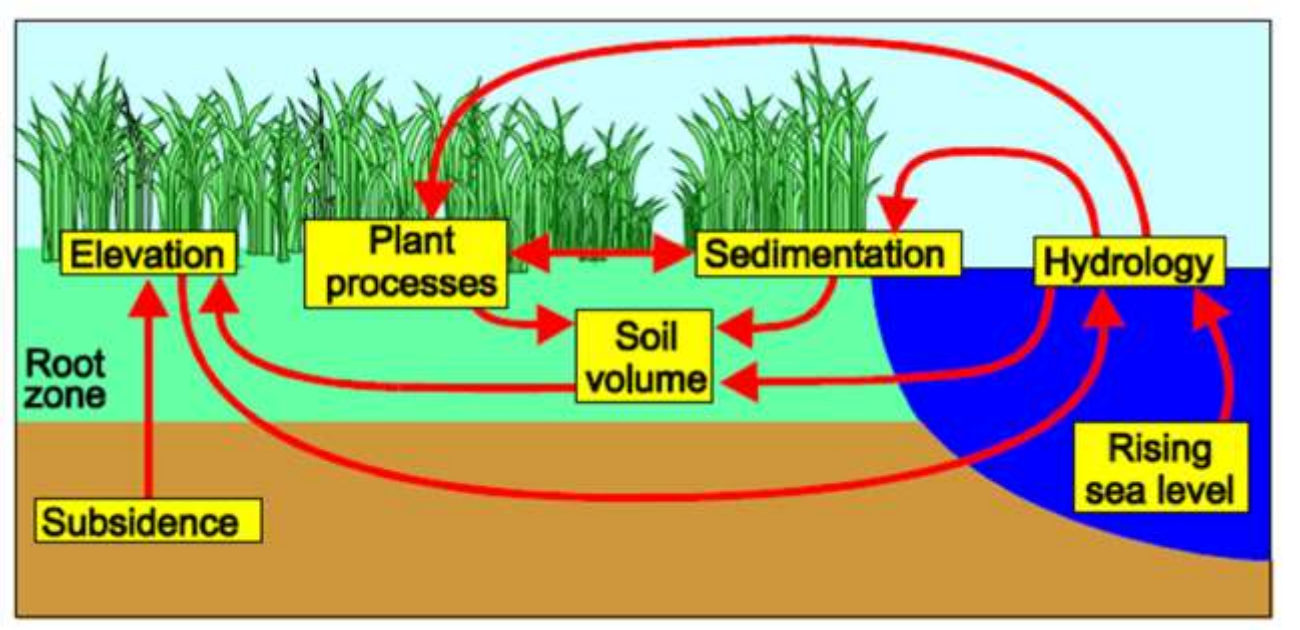


- **To improve our ability to determine the effectiveness of individual coastal restoration projects.**
- **Provide information to evaluate coastal wetlands at the project, basin, and coastwide scales.**
- **To determine the ecological condition of coastal wetlands to ensure that the strategic coastal planning for Louisiana (Coast 2050, LCA, Louisiana Master Plan) is effective in recreating a sustainable coastal ecosystem.**





- **Funded by CWPPRA in 2003**
- **~ 390 CRMS sites**
- **Long-term dataset (2006-2019)**
- **Sites inside & outside of CWPPRA projects**
- **Sites in swamp, fresh, intermediate, brackish, and salt marsh**
- **Allows for multi-scale assessments through CRMS report cards**
- **Data used for future scenario modeling**



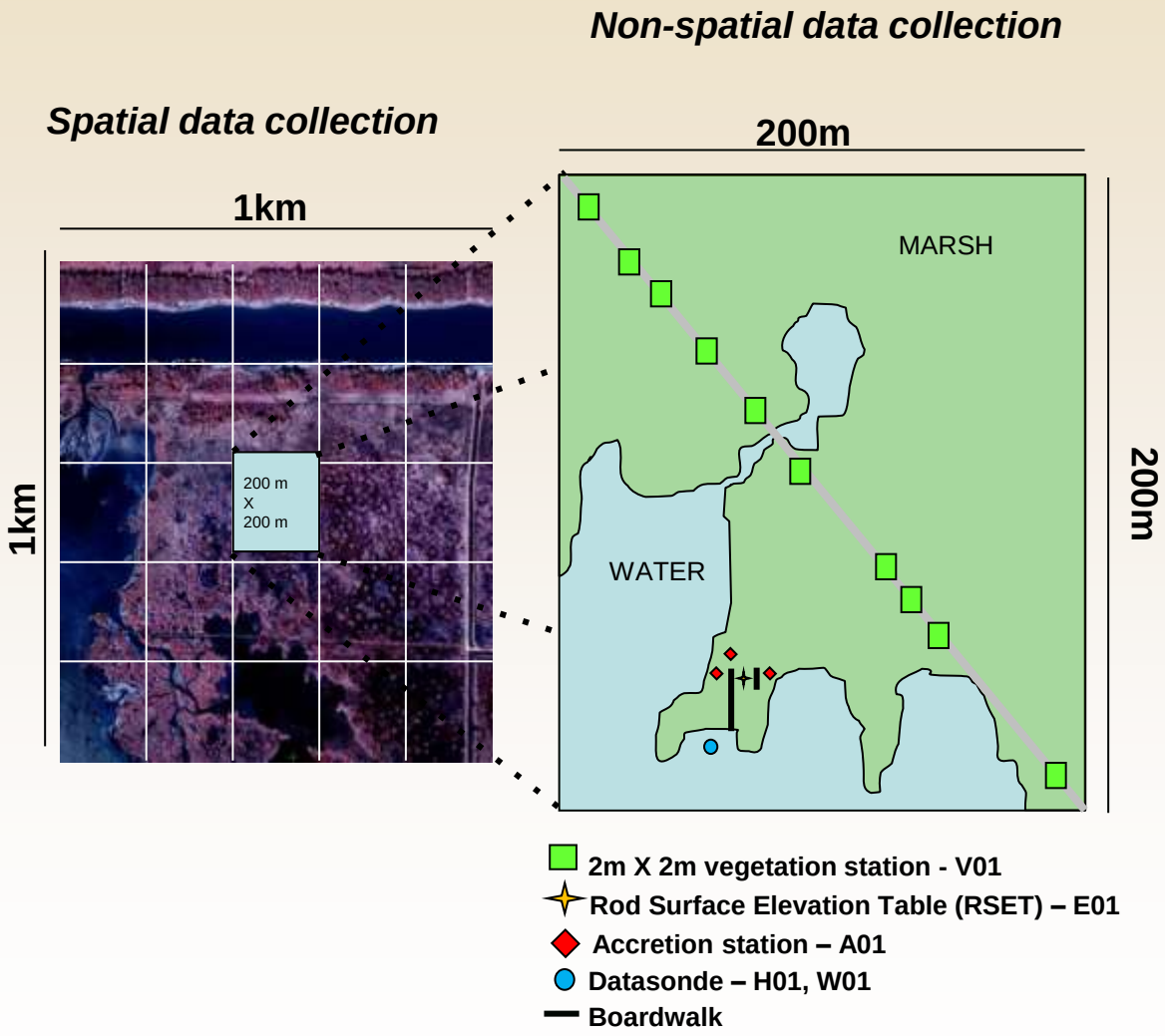
Questions to address through CRMS:

Did the restoration program:

- reduce coastal wetland loss?
- sustain a diversity of vegetation types within basins?

Is the restoration program effective in reducing major stressors on wetlands (i.e., flooding regime, salinity, elevation change)?

Which project types are the most effective in creating, restoring, protecting and enhancing wetlands?



CRMS Site vs. CRMS Station

Typical Marsh Site

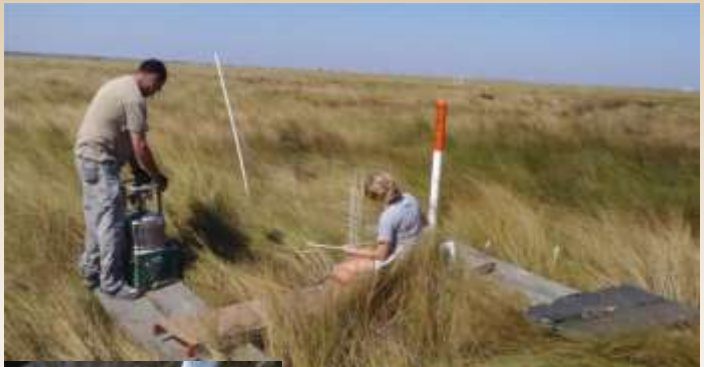
Typical Swamp Site

Aerial photo **2005** **2008**



1km² scale:
High resolution aerial photography based land:water analyses to investigate land change through time.

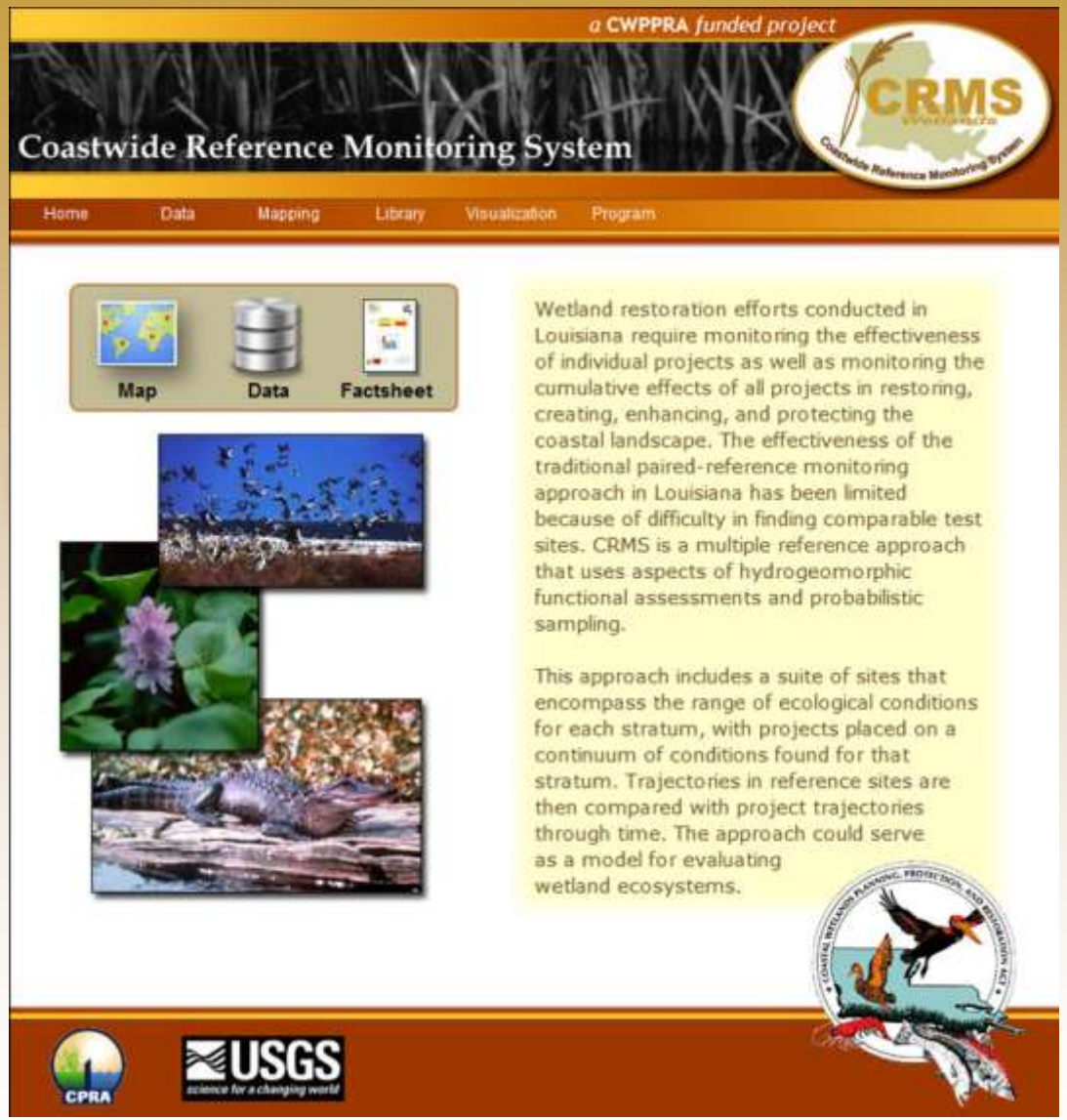
200m² scale: Field data collection using standardized data collection protocols and consistent sampling intervals





Site Layout

Data Type	Parameter	Method	Scale	Frequency
Land change	Land:Water Ratio	Satellite Imagery	Hydrologic Basin	3 years
	Land:Water Ratio	Digital Aerial Photography	CRMS Site (1 km^2)	3 years
Vegetation	Emergent Vegetation	Braun Blanquet: % Cover, Species Richness, Height of Dominant Species	(10) 2m x 2m plots per marsh site or (9) plots per swamp sites	Annually during peak biomass
	Forested Vegetation	DBH, Canopy Cover, Understory veg	(3) 20m x 20m Forested plots & (9) 6m X6m Understory plots per site	3 yrs during peak biomass
Soils	Soil Characteristics	Core samples profiled into 4 cm increments to 24 cm. Bulk Density, OM%, Soil Salinity, pH, and Moisture.	3 cores, 18 archived samples per site	6 to 10 years
	Vertical Accretion	Feldspar Plots/Cryogenic Cores	3 plots per site	Twice per year
	Marsh Elevation Change	Rod Surface Elevation Table (RSET)	4 directions per site	Twice per year
Hydrology	Soil Porewater	10 and 30 cm syringe sippers	3 samples per depth per site and at vegetation plots	Variable and annually
	Surface Water Salinity, Temp and Water Level	Submersible Data Logger	in available water within 200m of CRMS site or in a well	Hourly



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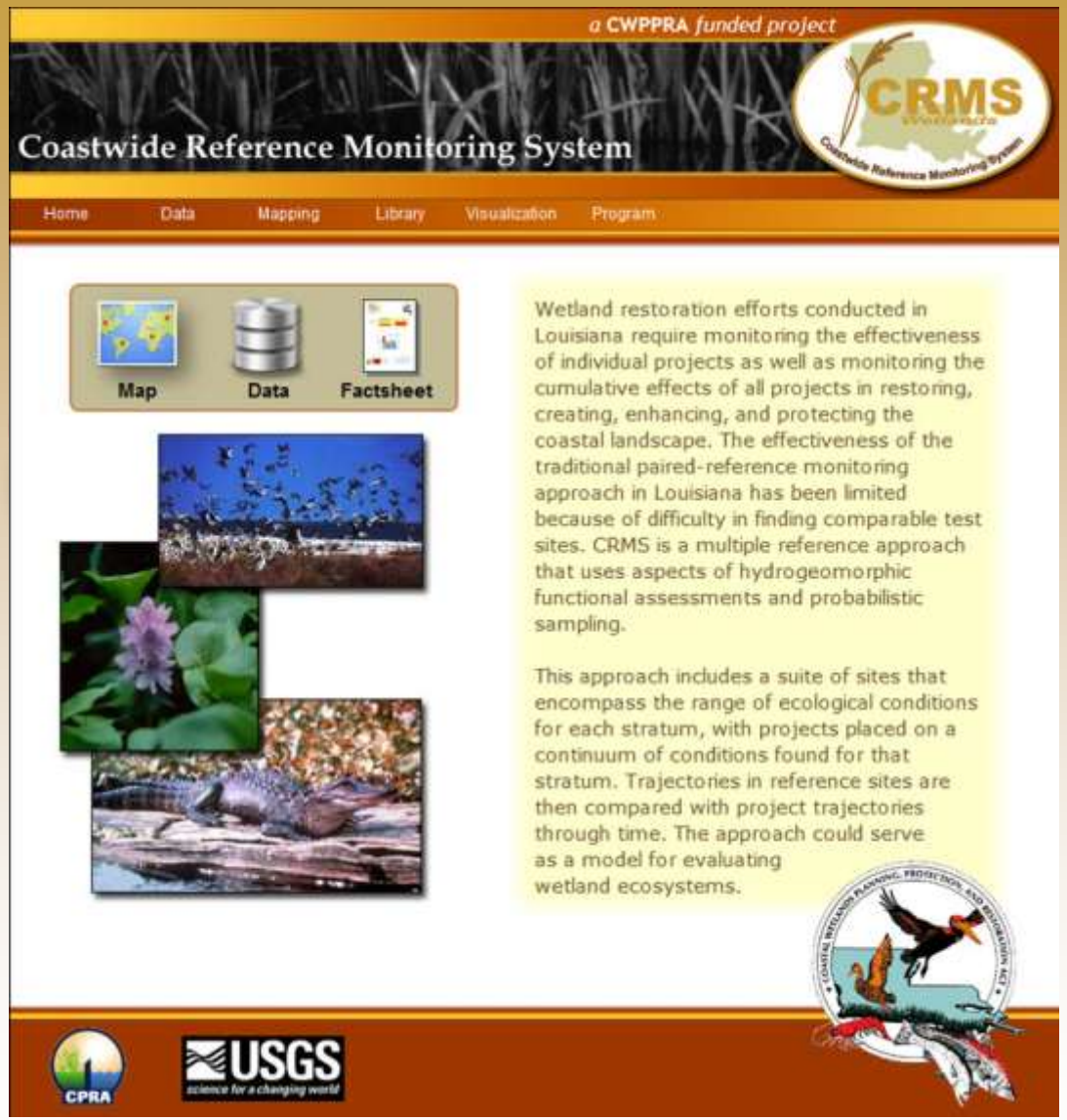
- State and federal scientists
- Academics
- Computer programmers
- Web developers
- Oversight review- CWPPRA Monitoring Work Group



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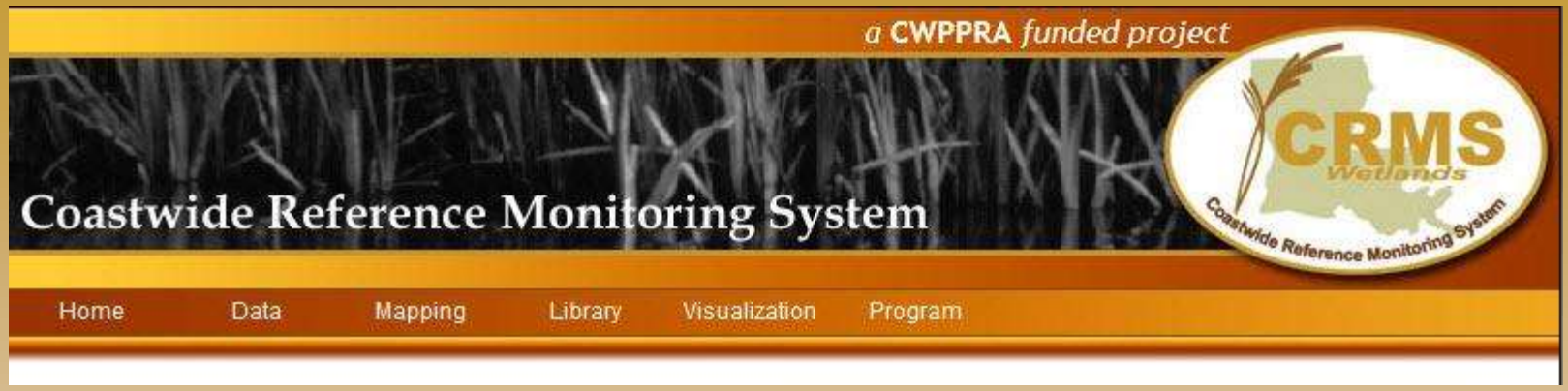
- Provide web mapping viewer
- Summarize and visualize data at multiple scales
- Provide on-the-fly user defined graphics and tools
- Simplify querying and downloading of data
- Develop multi-metric ecological indices
- Develop report card

Site Overview – Main Menu



Data

- **Spatial Data / Tabular SONRIS Data Tool / Tabular CRMS Bulk Download**

Mapping

- **SONRIS / Basic Map Viewer**

Library

- **Maps / Presentations / SONRIS Reports / CRMS Reports**

Visualization

- **Charting / Bulk Charting / Conceptual Models**

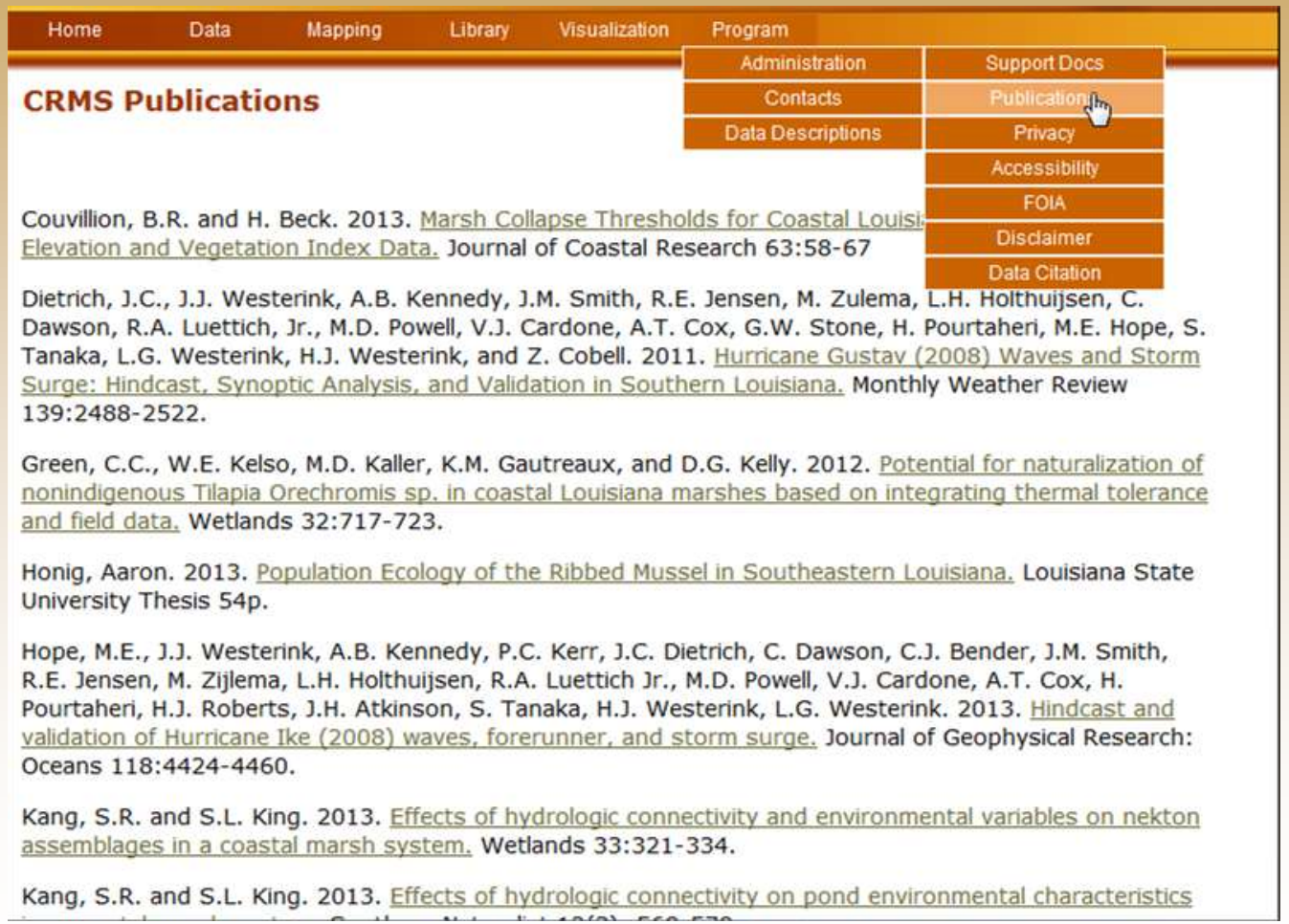
Program

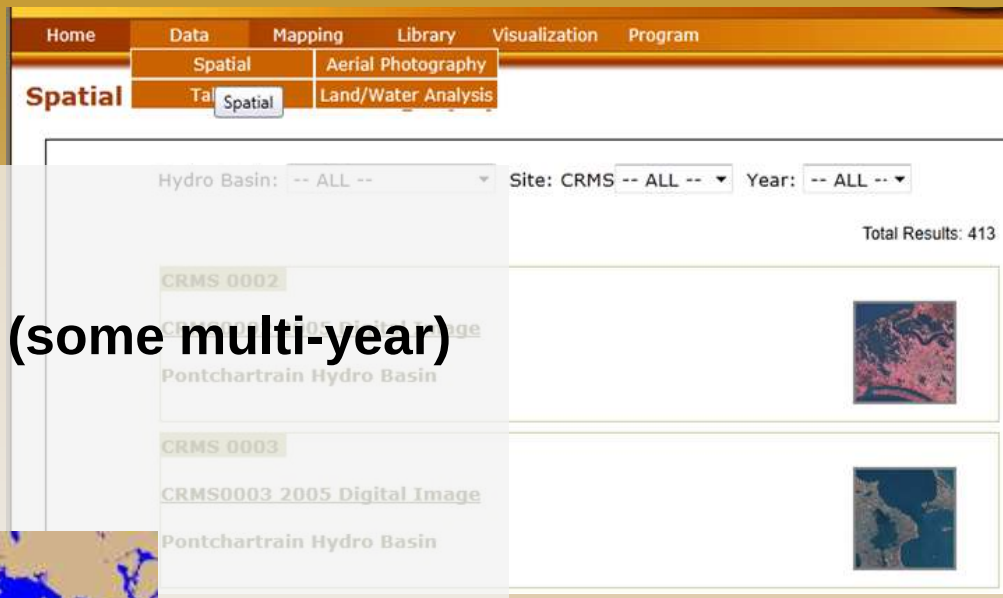
- **Administrative links / Data Citation / Data Descriptions / Publications**

Program menu contains links to:

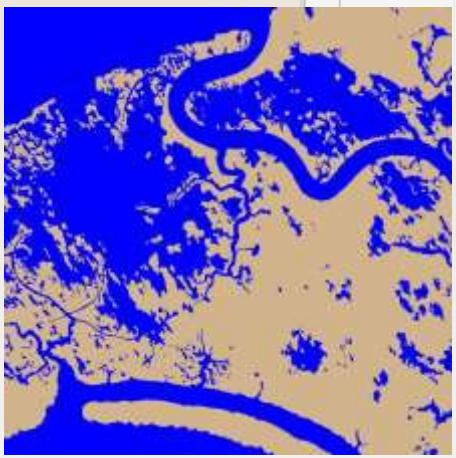
- **Administrative Information**
  - **Supporting or Reference Documents**
  - **CRMS Related Publications**
  - **Privacy and Accessibility Statements**
  - **Freedom of Information Act**
  - **Data Citation**
- **Contacts from both USGS and CPRA**
- **Data Description Information**
  - **Includes analytical framework documents**
  - **Report card analysis explanations**

New Page: CRMS Publication Page





- **Data menu contains links to:**
  - **Spatial Data:**
    Available for each CRMS site (some multi-year)
    - **Aerial Mosaic**
    - **Land/Water Analysis**

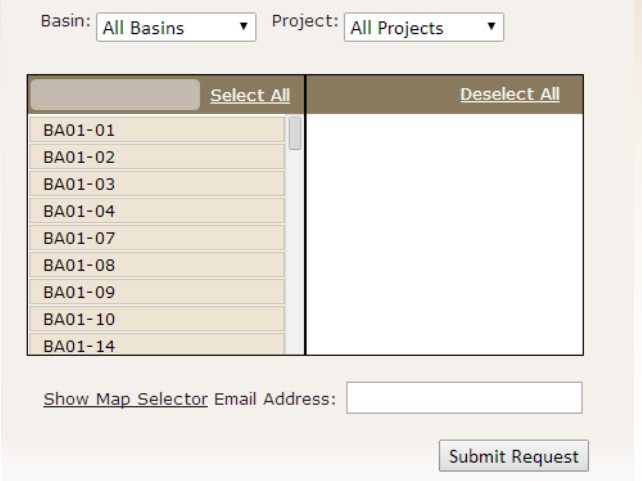


  - **Tabular Data**
    - **Links back to SONRIS data download tools**
    - **CRMS bulk data download tools**

Data

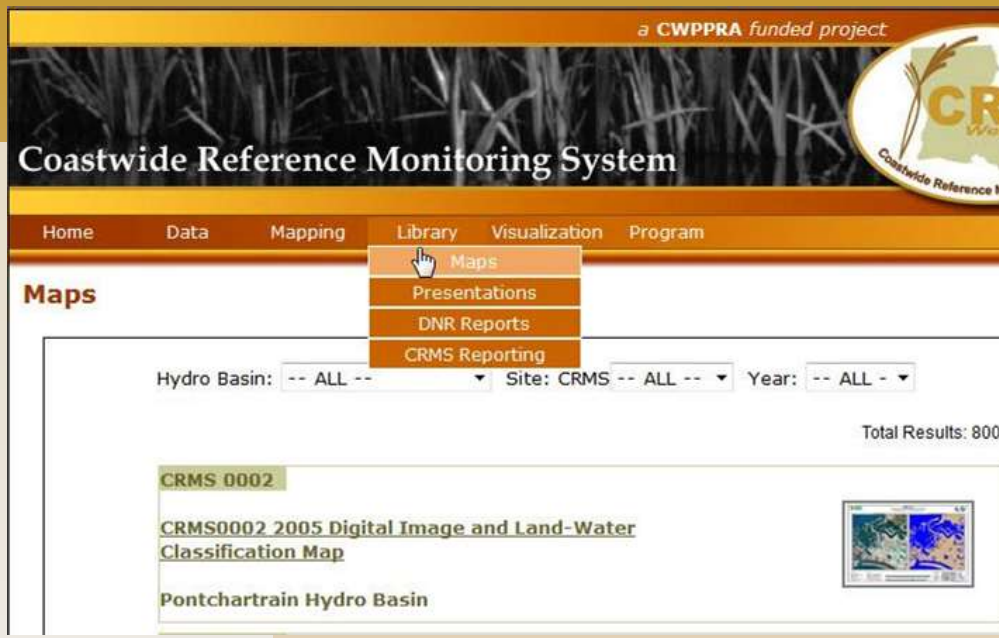
- **CRMS bulk data download**

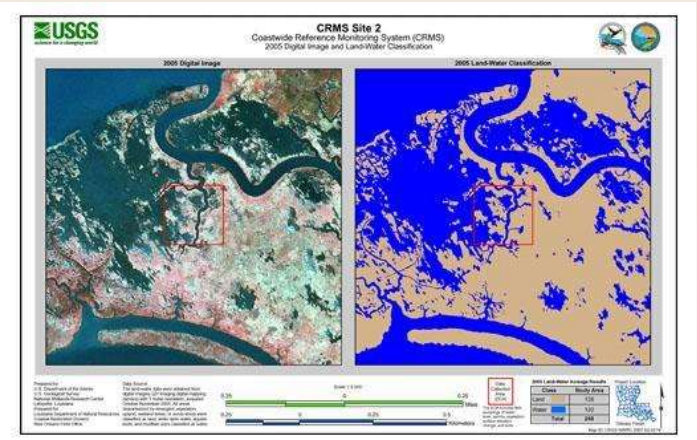
All values for selected years, for selected stations(queue processes first come first serve)



Library menu contains links to:

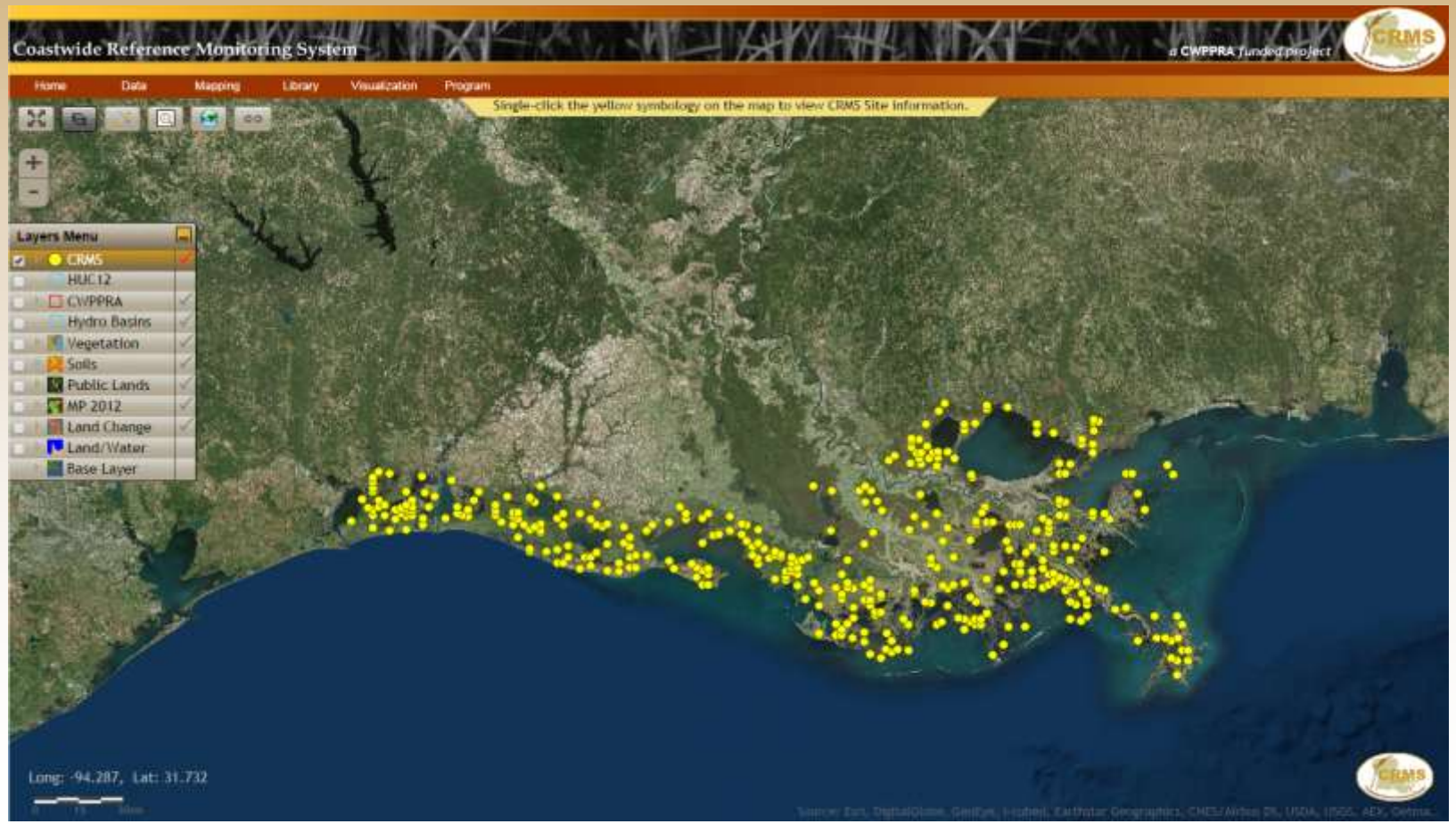
- **Maps: Available for each CRMS site (some multi-year)**
- **Presentations**
- **Reports (via SONRIS)**
- **CRMS Report Card**





Mapping menu contains links to:

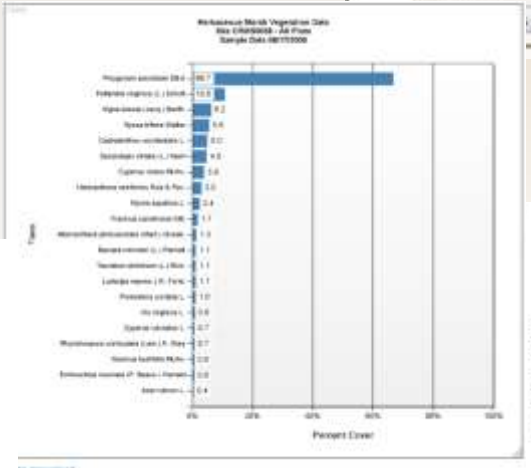
- SONRIS Viewer
- Basic Map Viewer

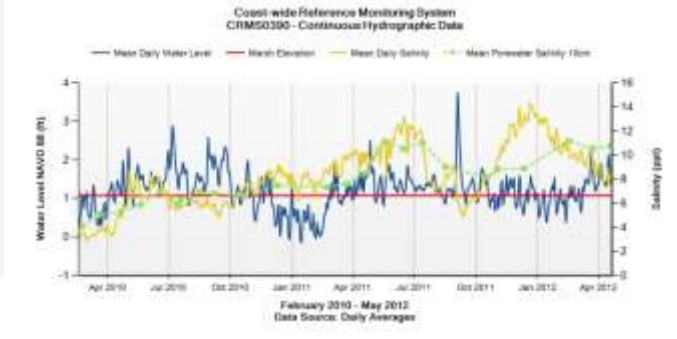


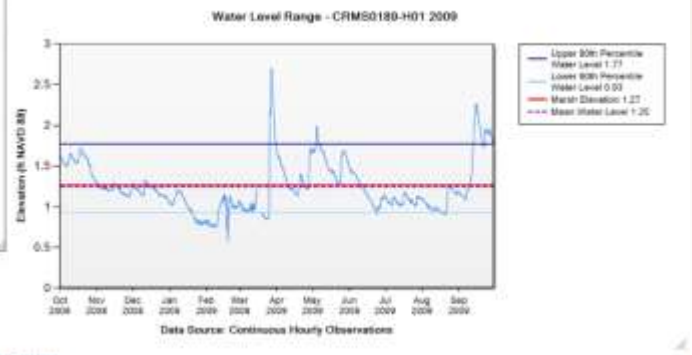
Visualizations

Visualization menu contains links to:

- **Charts…Lots of Charts.**
  - Surface Elevation/Accretion
  - % Organic / Bulk Density
  - Vegetation
  - Forested
  - Porewater
  - Hydrographic (Salinity, Temp, Water Level)
  - Precipitation
  - Report Card







Using the charting interface

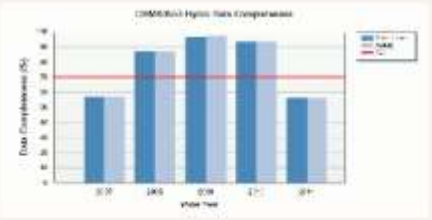
Charting Usage

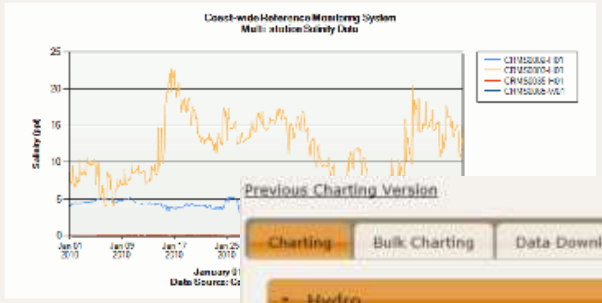
Previous Charting Version

Charting | Bulk Charting | Data Download | Reporting

- Hydro
  - Water Level Range
  - Hydro Completeness
  - Salinity
  - Water Level
  - Temperature
  - Continuous
  - Site Hydro Index
  - Soil Porewater
  - Precipitation
- Vegetation
- Soil
- Spatial
- Report Card Charts

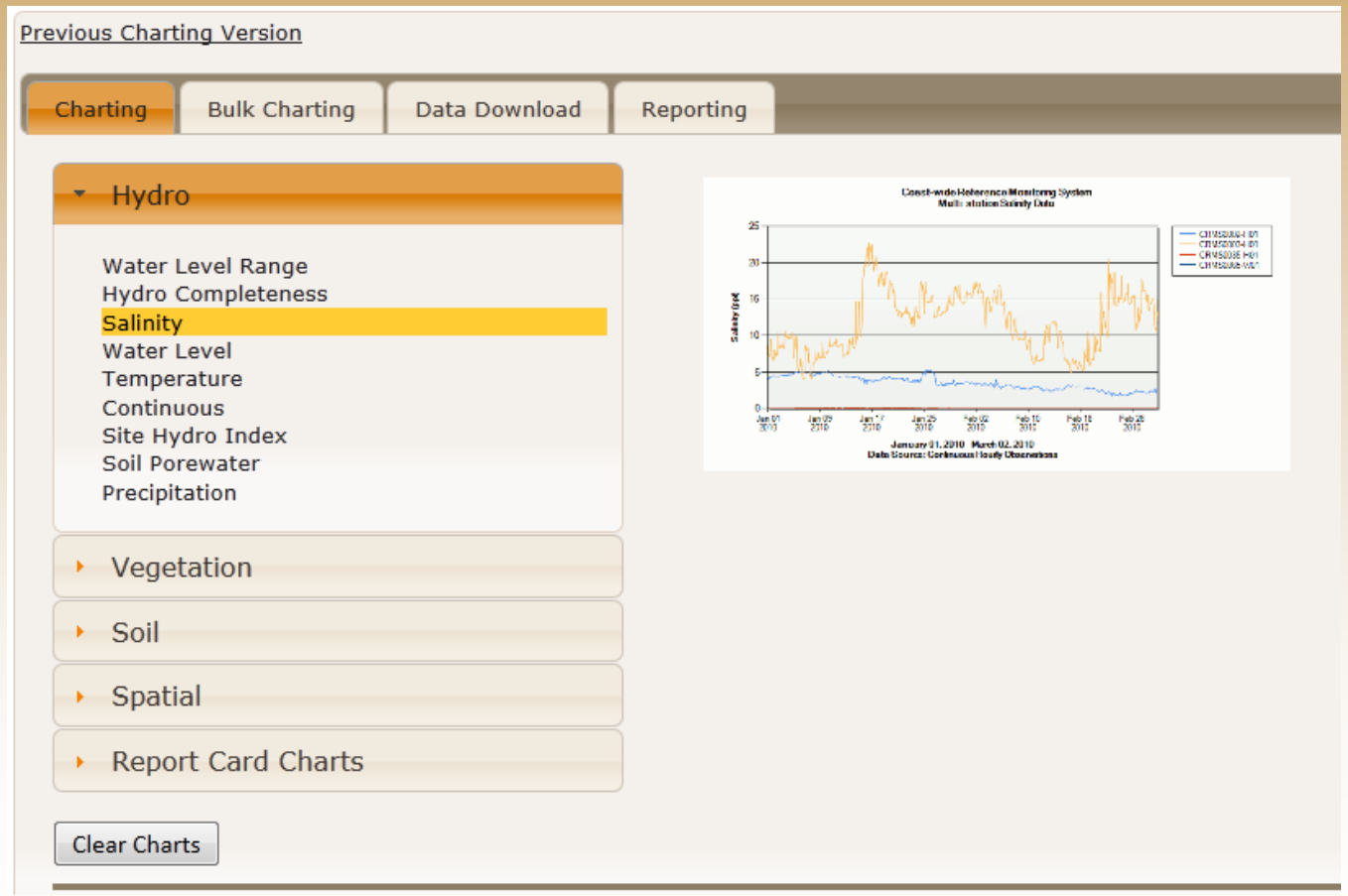
Clear Charts





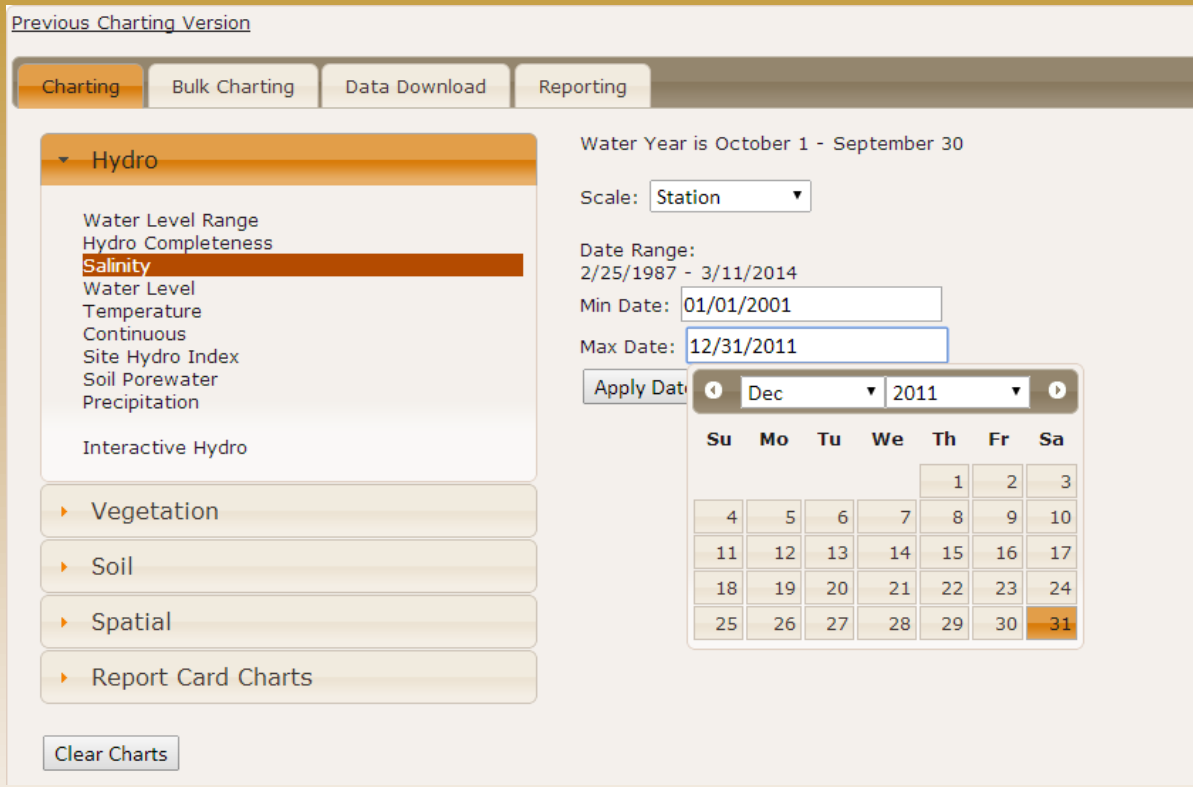
Charting Usage

1. Pick a Data Category
    1. Hydro
2. Pick a Parameter
    1. Salinity



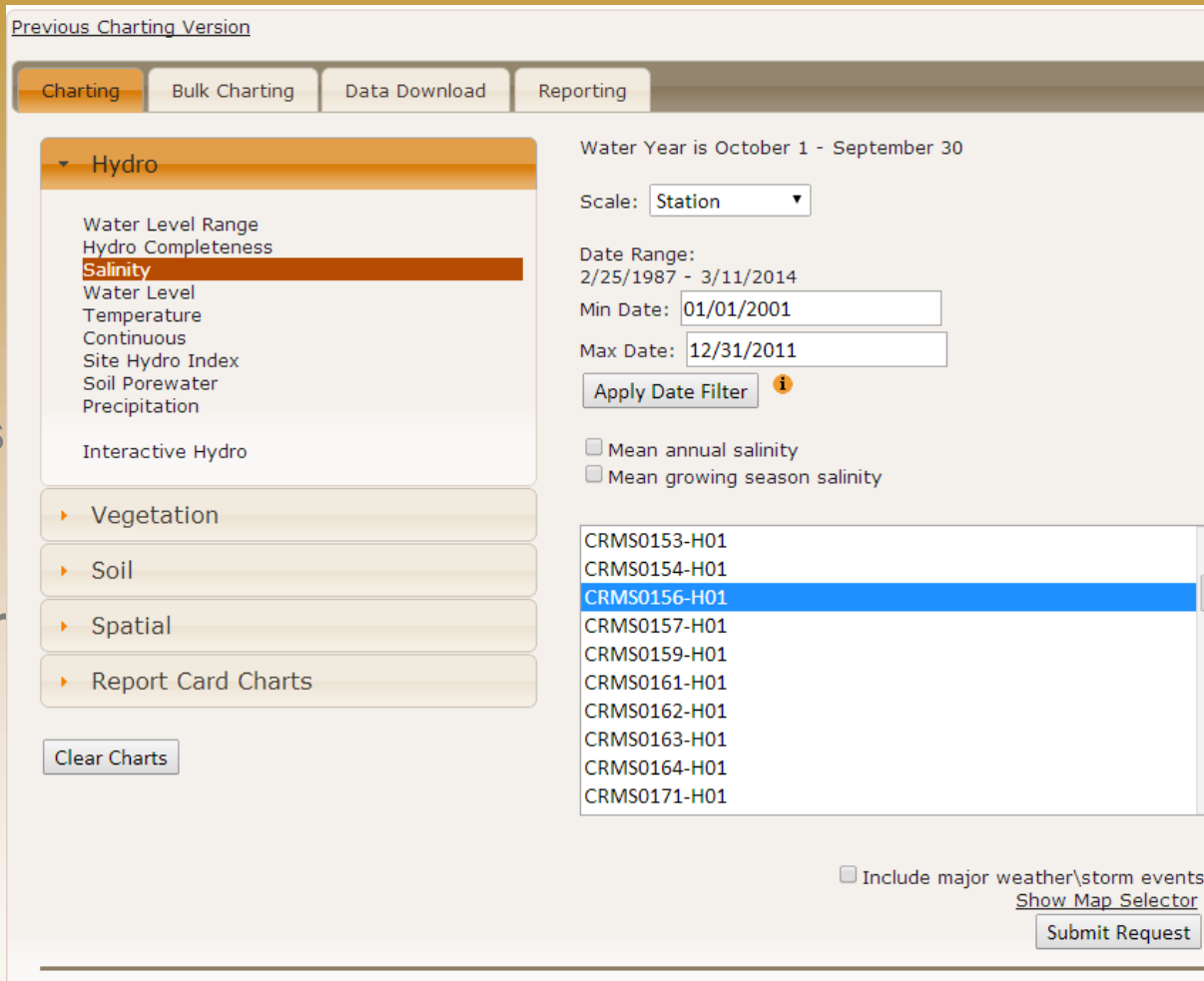
Charting Usage

1. Pick a Data Category
    1. Hydro
2. Pick a Parameter
    1. Salinity
3. Pick a Scale
    1. Station
4. Enter Start / End Dates
    1. 1/1/2001
    2. 12/31/2011
    3. Apply Date Filter



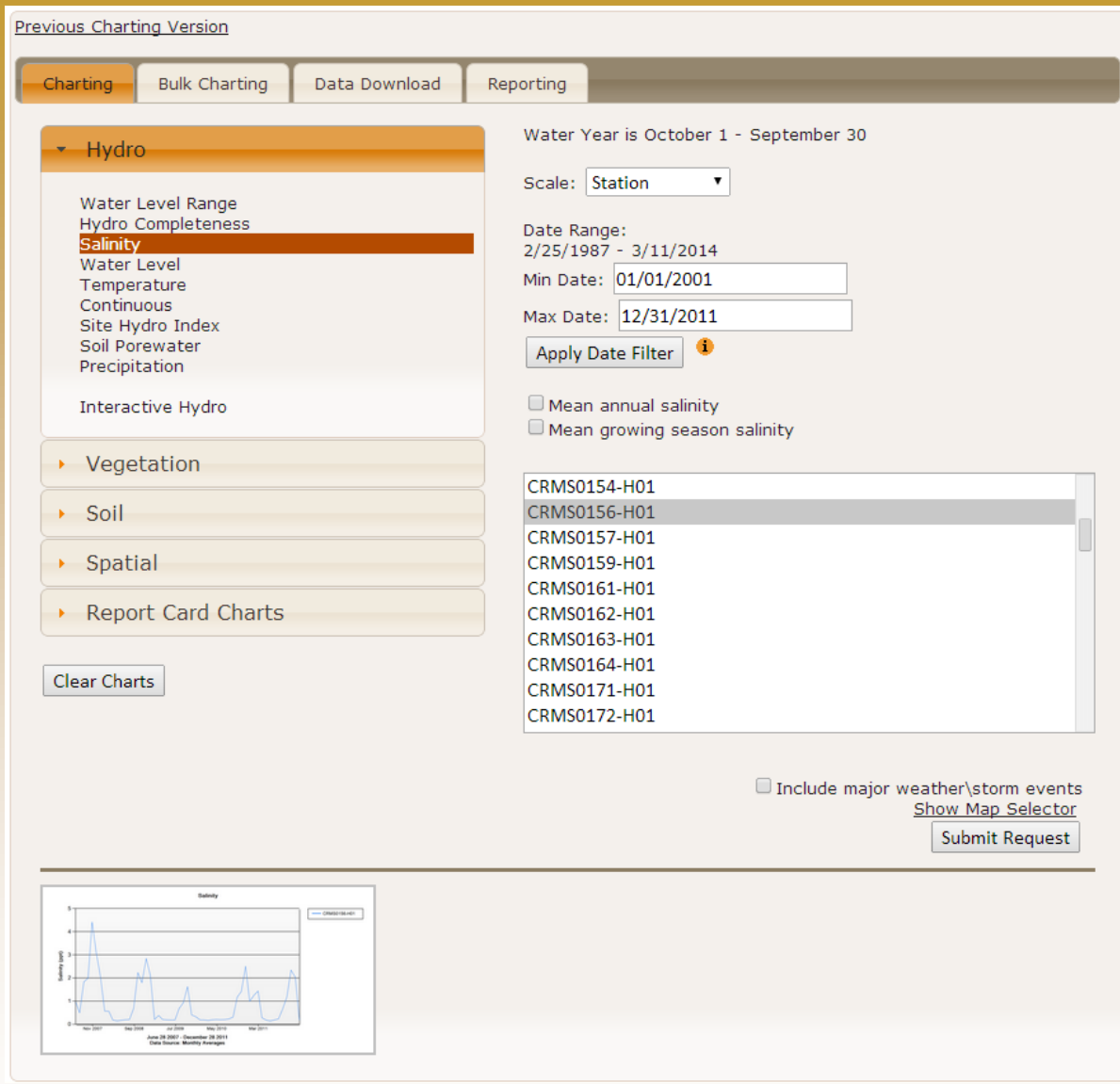
Charting Usage

1. Pick a Data Category
    1. Hydro
2. Pick a Parameter
    1. Salinity
3. Pick a Scale
    1. Site
4. Enter Start / End Dates
    1. 1/1/2001
    2. 12/31/2011
    3. Apply Date Filter
5. **Pick Site**



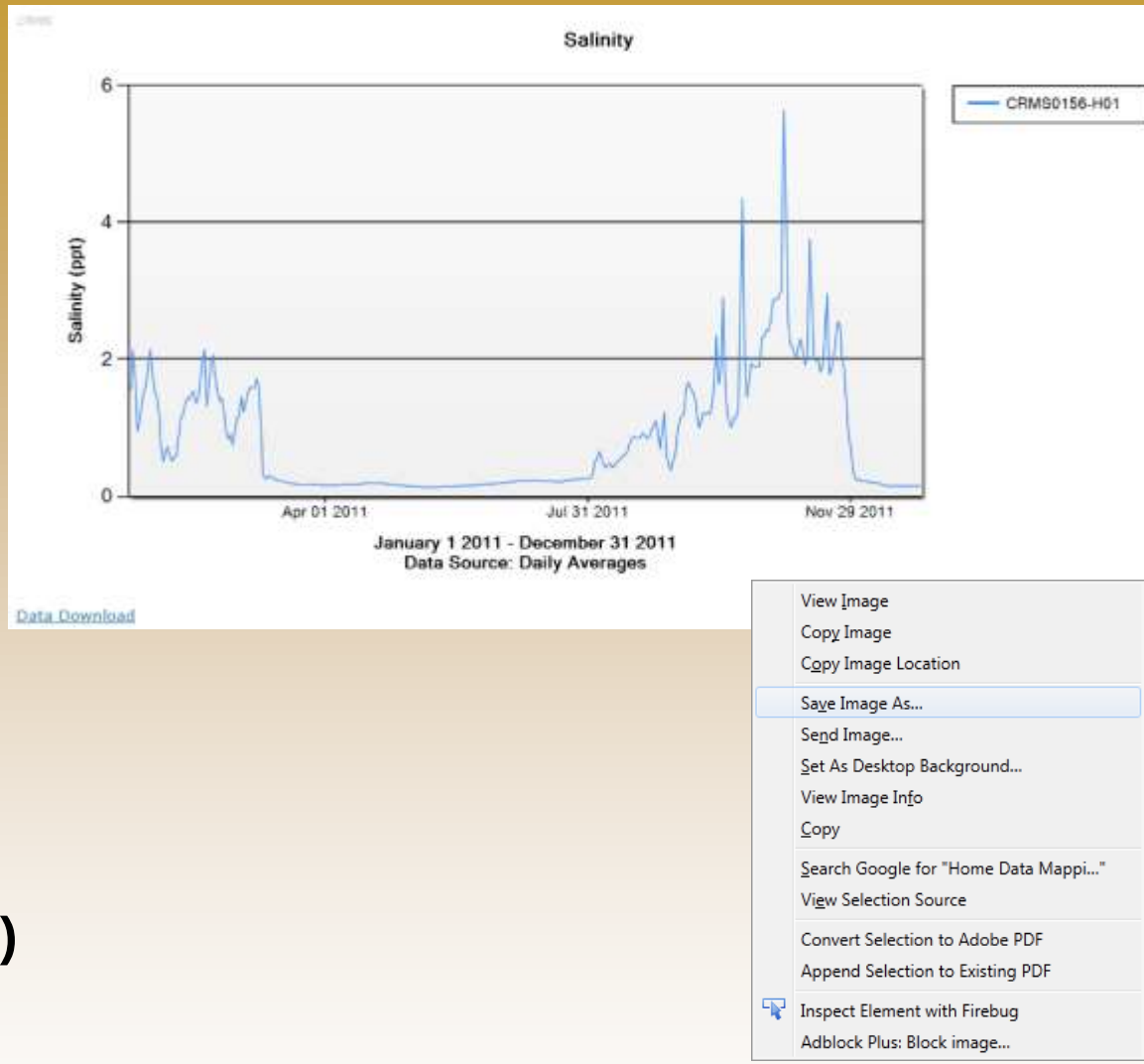
Charting Usage

1. Pick a Data Category
    1. Hydro
2. Pick a Parameter
    1. Salinity
3. Pick a Scale
    1. Site
4. Enter Start / End Dates
    1. 1/1/2001
    2. 12/31/2011
    3. Apply Date Filter
5. **Pick Site**



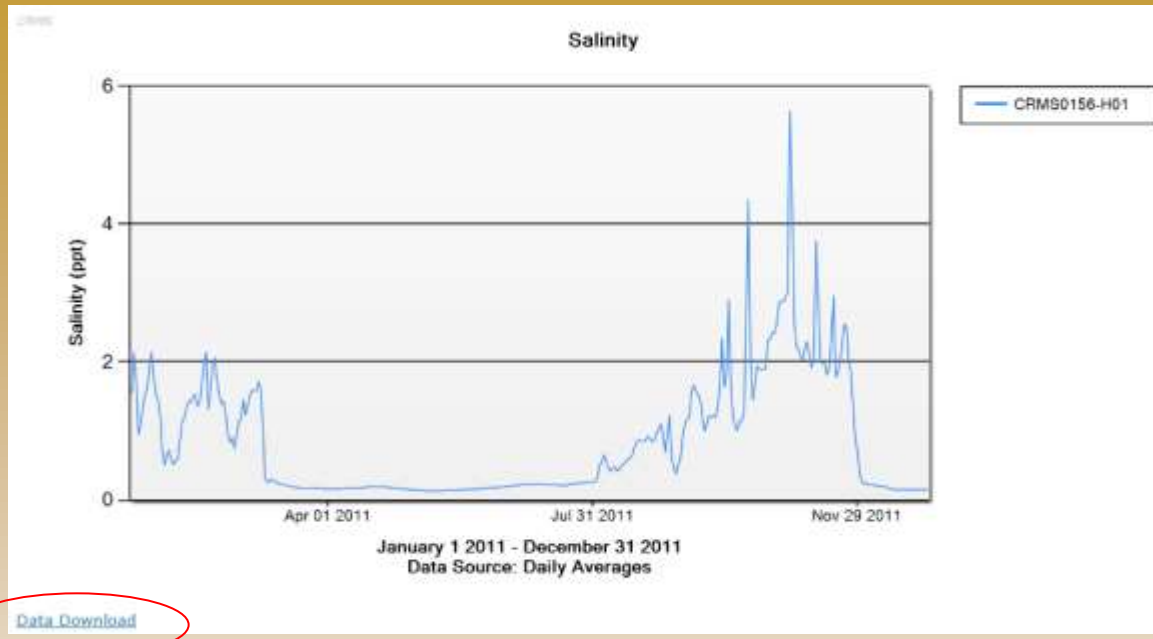
Charting Usage

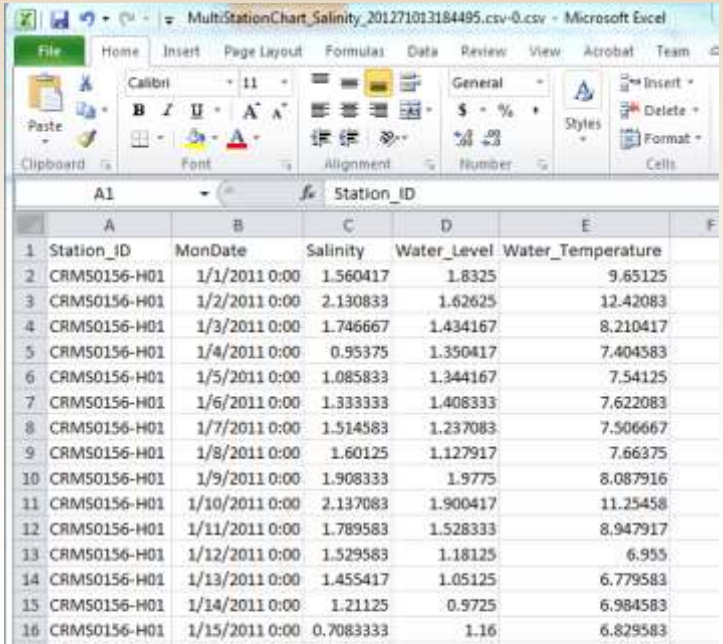
1. Pick a Data Category
    1. Hydro
2. Pick a Parameter
    1. Salinity
3. Pick a Scale
    1. Site
4. Enter Start / End Dates
    1. 1/1/2001
    2. 12/31/2011
    3. Apply Date Filter
5. Pick Site
6. **View Chart**
7. **Save Chart Image**
8. **Download Data (optional)**



Charting Usage

1. Pick a Data Category
    1. Hydro
2. Pick a Parameter
    1. Salinity
3. Pick a Scale
    1. Site
4. Enter Start / End Dates
    1. 1/1/2001
    2. 12/31/2011
    3. Apply Date Filter
5. Pick Site
6. **View Chart**
7. **Save Chart Image**
8. **Download Data (optional)**

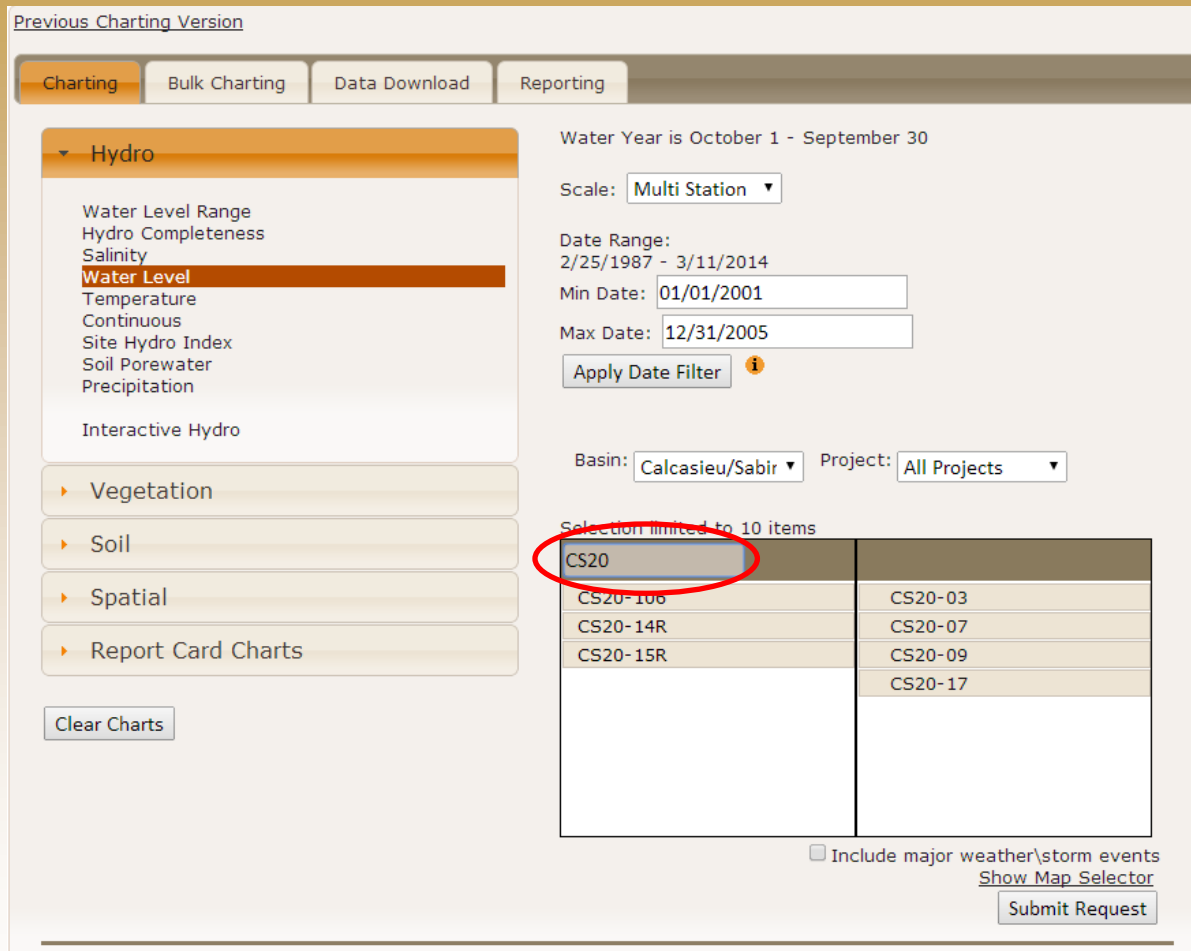




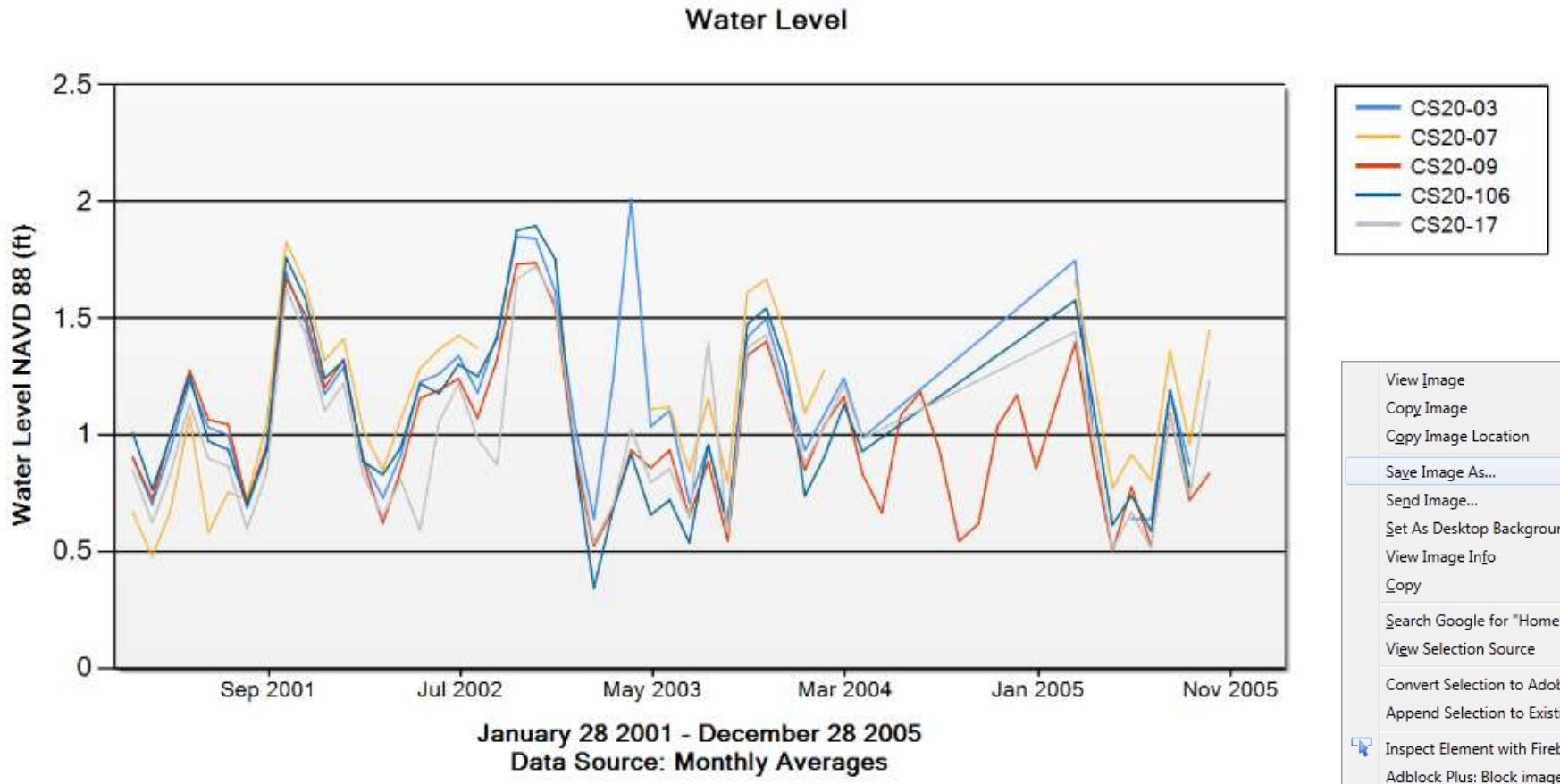
	A	B	C	D	E
1	Station_ID	MonDate	Salinity	Water_Level	Water_Temperature
2	CRMS0156-H01	1/1/2011 0:00	1.560417	1.8325	9.65125
3	CRMS0156-H01	1/2/2011 0:00	2.130833	1.62625	12.42083
4	CRMS0156-H01	1/3/2011 0:00	1.746667	1.434167	8.210417
5	CRMS0156-H01	1/4/2011 0:00	0.95375	1.350417	7.404583
6	CRMS0156-H01	1/5/2011 0:00	1.085833	1.344167	7.54125
7	CRMS0156-H01	1/6/2011 0:00	1.333333	1.408333	7.622083
8	CRMS0156-H01	1/7/2011 0:00	1.514583	1.237083	7.506667
9	CRMS0156-H01	1/8/2011 0:00	1.60125	1.127917	7.66375
10	CRMS0156-H01	1/9/2011 0:00	1.908333	1.9775	8.087916
11	CRMS0156-H01	1/10/2011 0:00	2.137083	1.900417	11.25458
12	CRMS0156-H01	1/11/2011 0:00	1.789583	1.528333	8.947917
13	CRMS0156-H01	1/12/2011 0:00	1.529583	1.18125	6.955
14	CRMS0156-H01	1/13/2011 0:00	1.455417	1.05125	6.779583
15	CRMS0156-H01	1/14/2011 0:00	1.21125	0.9725	6.984583
16	CRMS0156-H01	1/15/2011 0:00	0.7083333	1.16	6.829583

Multi-Station Charting

1. Pick a Data Category
    1. Hydro
2. Pick a Parameter
    1. Water Level
3. Pick a Scale
    1. Multi Station
4. Enter Start / End Dates
    1. 1/1/2001
    2. 12/31/2011
    3. Apply Date Filter
5. Pick Stations

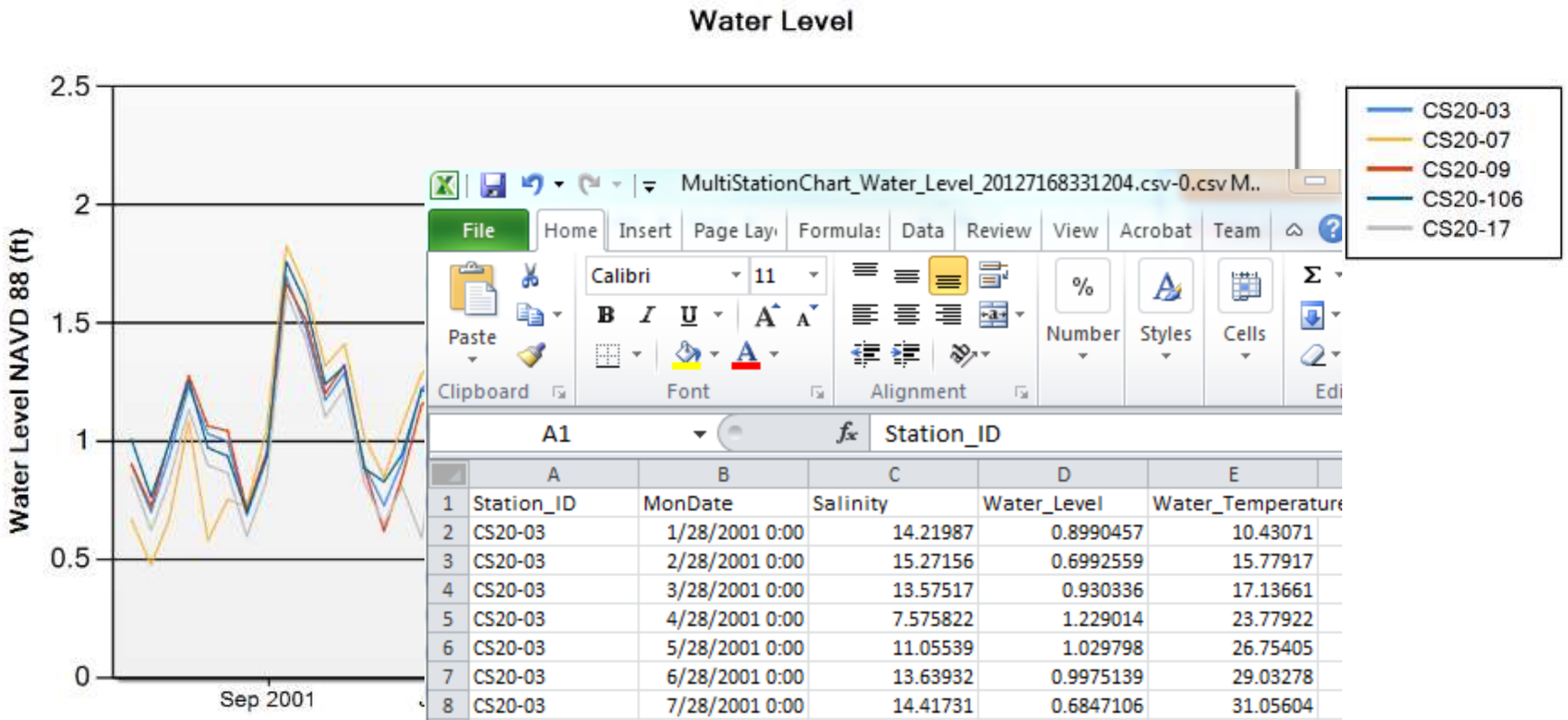


Multi-Station Charting



Data Download

Charting Usage



MultiStationChart_Water_Level_20127168331204.csv-0.csv M..

File | Home | Insert | Page Lay | Formulas | Data | Review | View | Acrobat | Team

Calibri 11

Paste | Clipboard | Font | Alignment | Number | Styles | Cells

A1 | Station_ID

	A	B	C	D	E
1	Station_ID	MonDate	Salinity	Water_Level	Water_Temperature
2	CS20-03	1/28/2001 0:00	14.21987	0.8990457	10.43071
3	CS20-03	2/28/2001 0:00	15.27156	0.6992559	15.77917
4	CS20-03	3/28/2001 0:00	13.57517	0.930336	17.13661
5	CS20-03	4/28/2001 0:00	7.575822	1.229014	23.77922
6	CS20-03	5/28/2001 0:00	11.05539	1.029798	26.75405
7	CS20-03	6/28/2001 0:00	13.63932	0.9975139	29.03278
8	CS20-03	7/28/2001 0:00	14.41731	0.6847106	31.05604
9	CS20-03	8/28/2001 0:00	11.12512	0.9266398	30.03915
10	CS20-03	9/28/2001 0:00	4.940278	1.693403	27.11963
11	CS20-03	10/28/2001 0:00	6.358652	1.480121	21.85023
12	CS20-03	11/28/2001 0:00	6.386568	1.172375	20.29367
13	CS20-03	12/28/2001 0:00	4.994678	1.288508	15.26509
14	CS20-03	1/28/2002 0:00	4.678748	0.8958547	13.06359
15	CS20-03	2/28/2002 0:00	5.253036	0.7263095	13.26759
16	CS20-03	3/28/2002 0:00	13.83337	0.9090995	17.05582
17	CS20-03	4/28/2002 0:00	13.41743	1.224444	23.67308
18	CS20-03	5/28/2002 0:00	12.05766	1.258804	25.77913

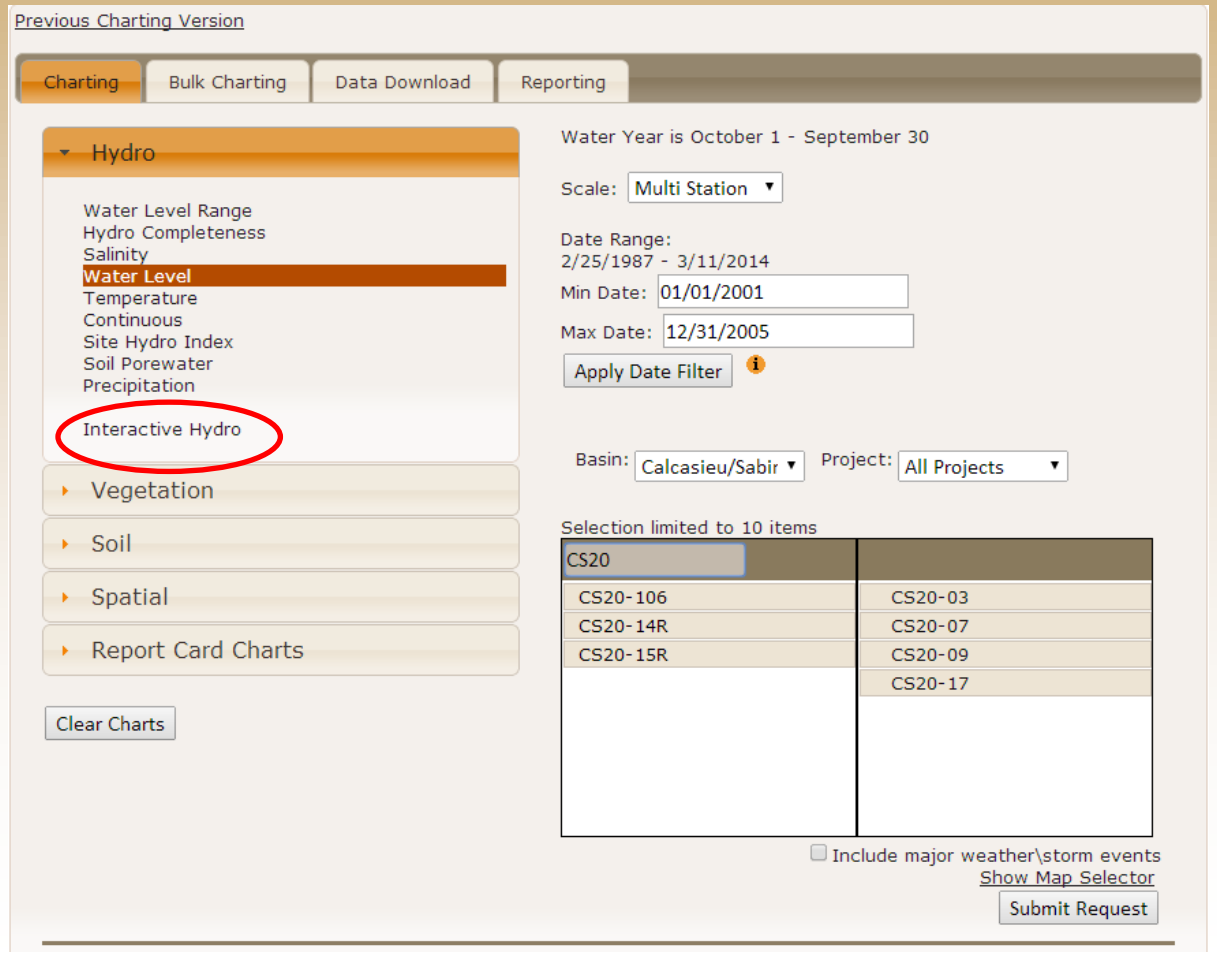
MultiStationChart_Water_Level_2

Average: 9824.390192 Count: 1260 Sum: 9785092.631 80%

Data Download

Interactive Hydro Chart

Great for hydro data exploration without having to download data.



Interactive Hydro Chart – same site with the multiple parameters

Coastwide Reference Monitoring System

a CWPPRA funded project

Home | Data | Mapping | Library | Visualization | Program

CRMS0489-H01 ▼ Water Level ▼ Blue ▼

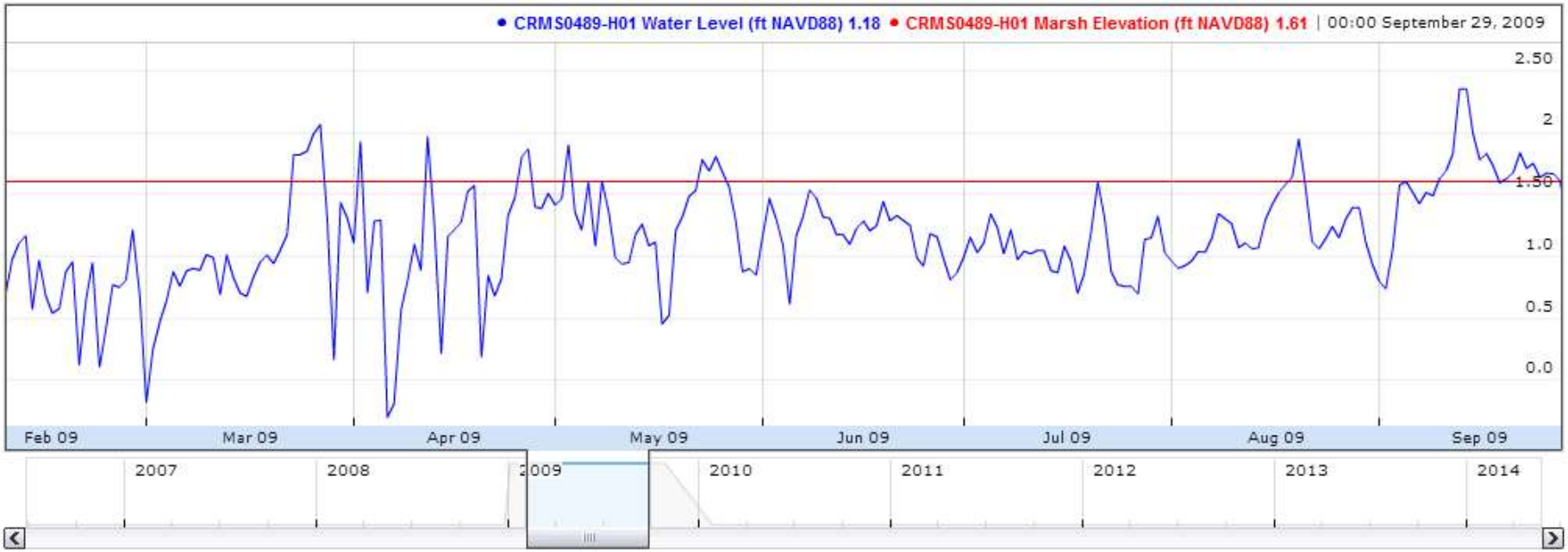
CRMS0489-H01 ▼ Marsh Elevation ▼ Red ▼

None ▼ Water Temperature ▼ Orange ▼

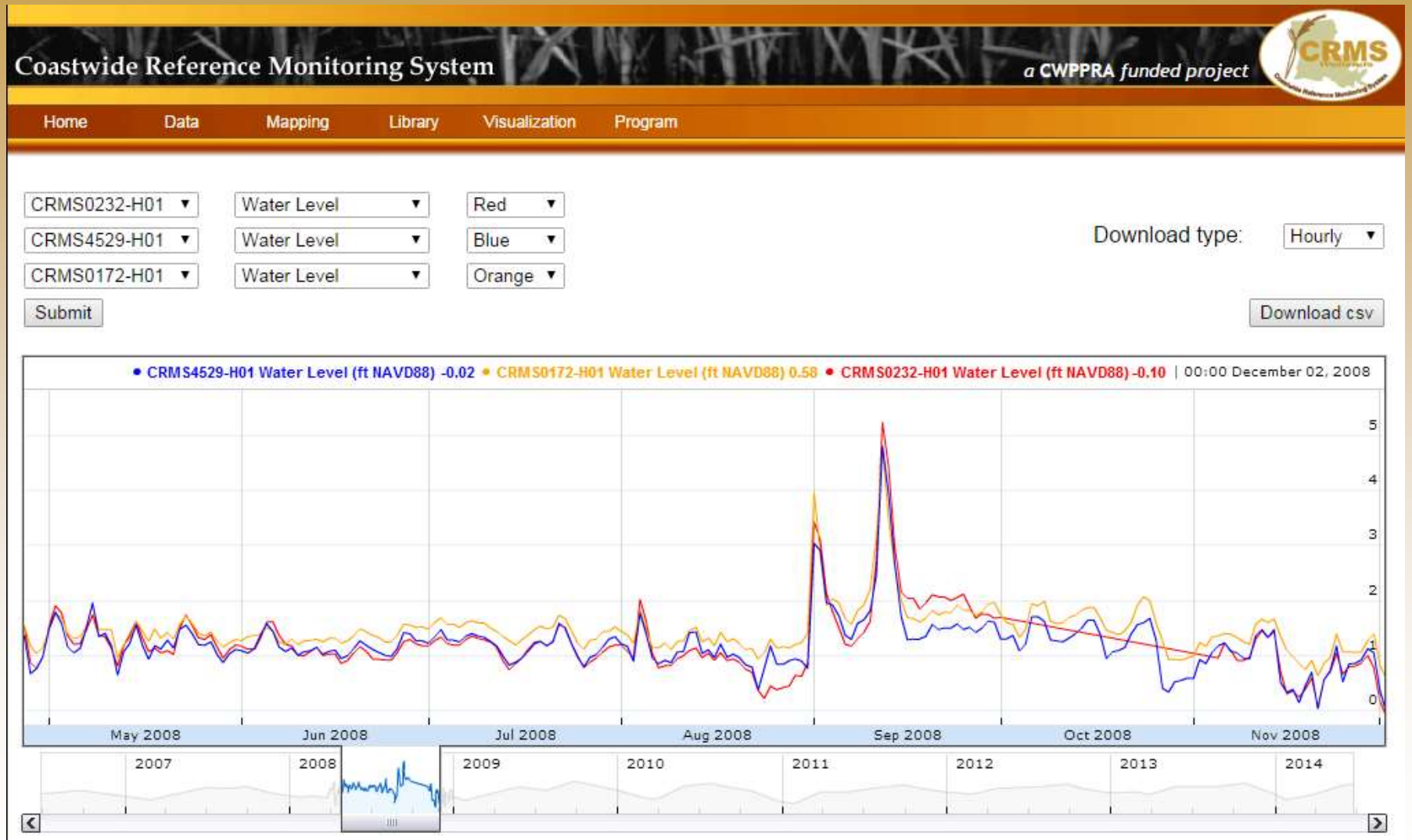
Submit

Download type: Hourly ▼

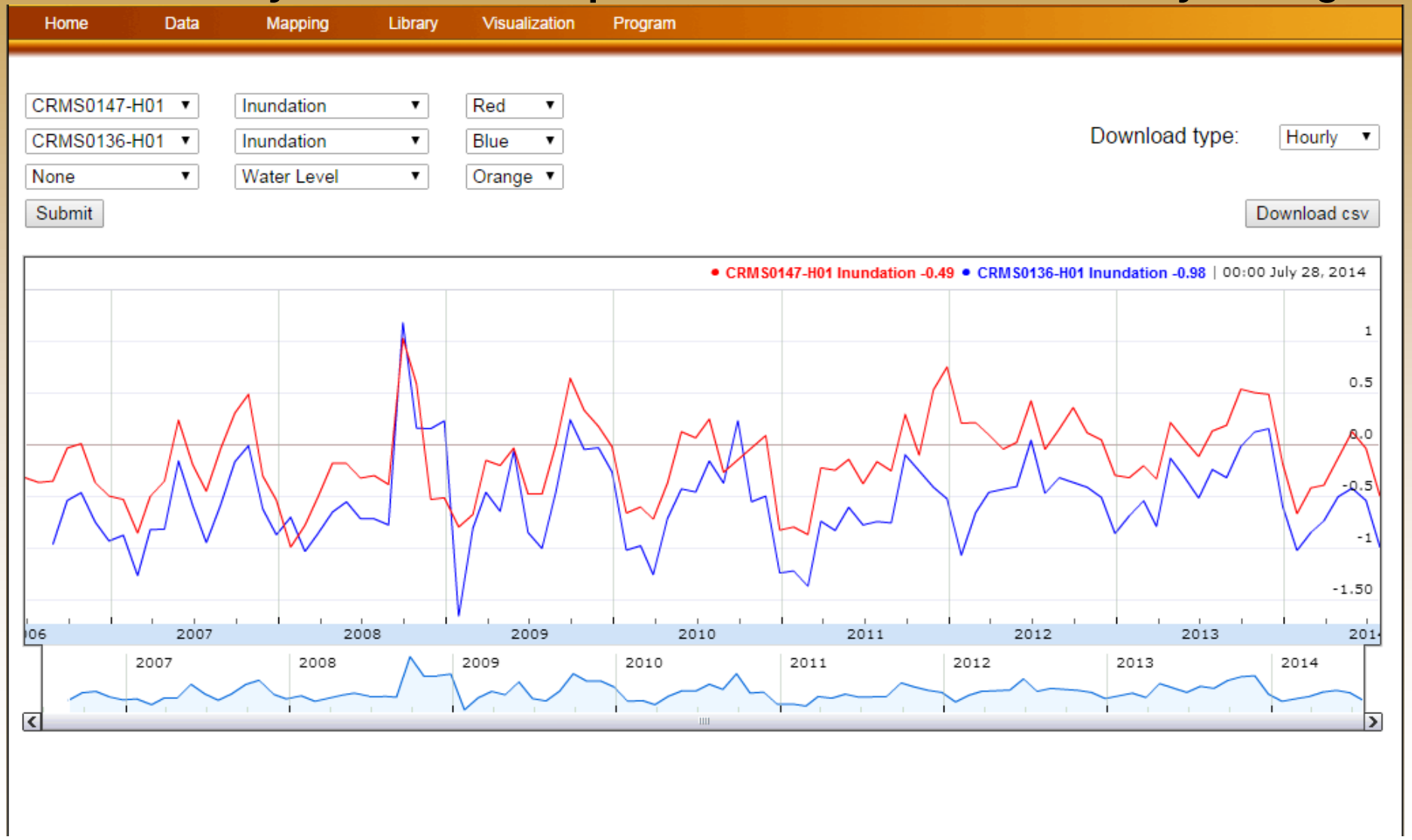
Download csv



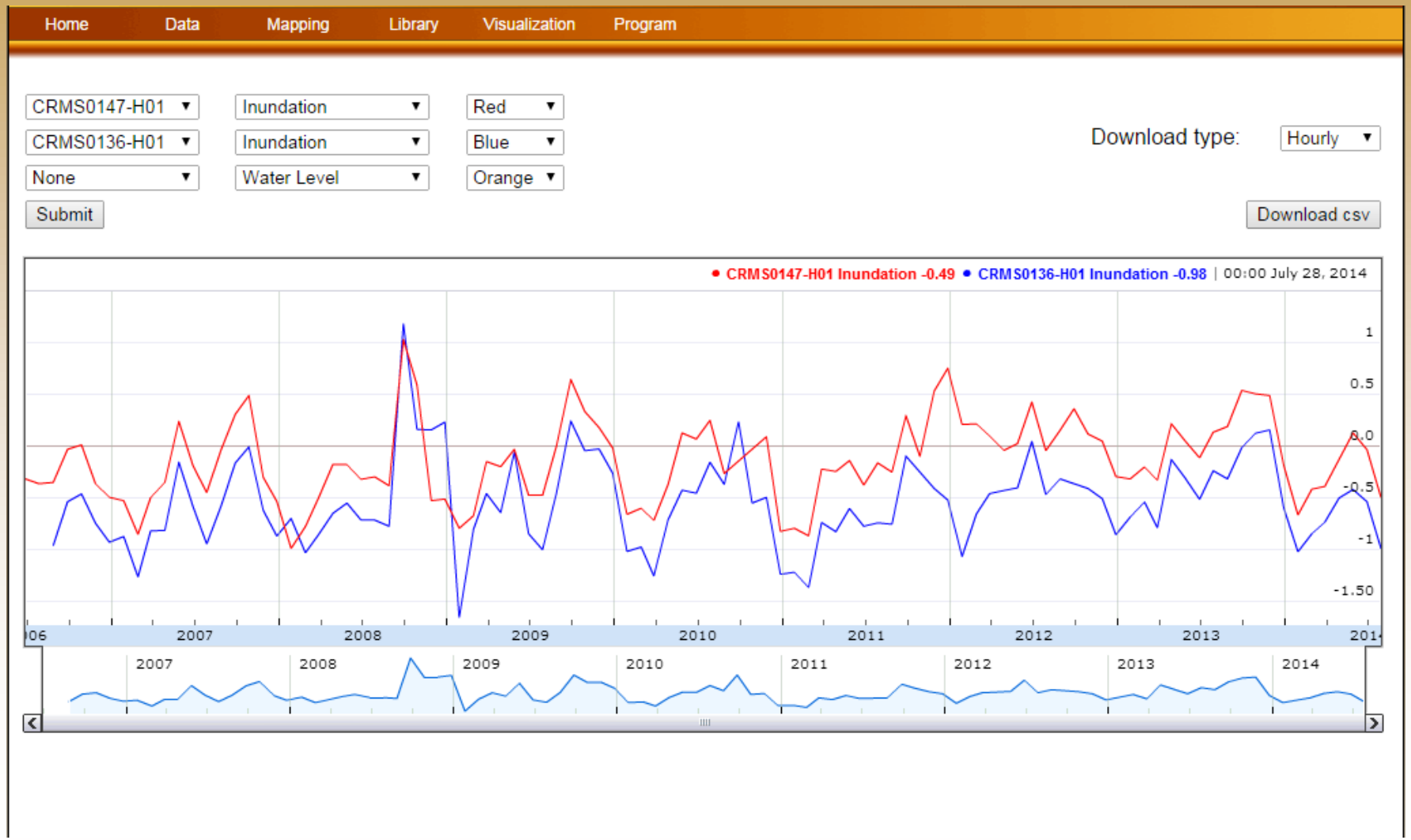
Interactive Hydro Chart – multiple sites with the same parameter



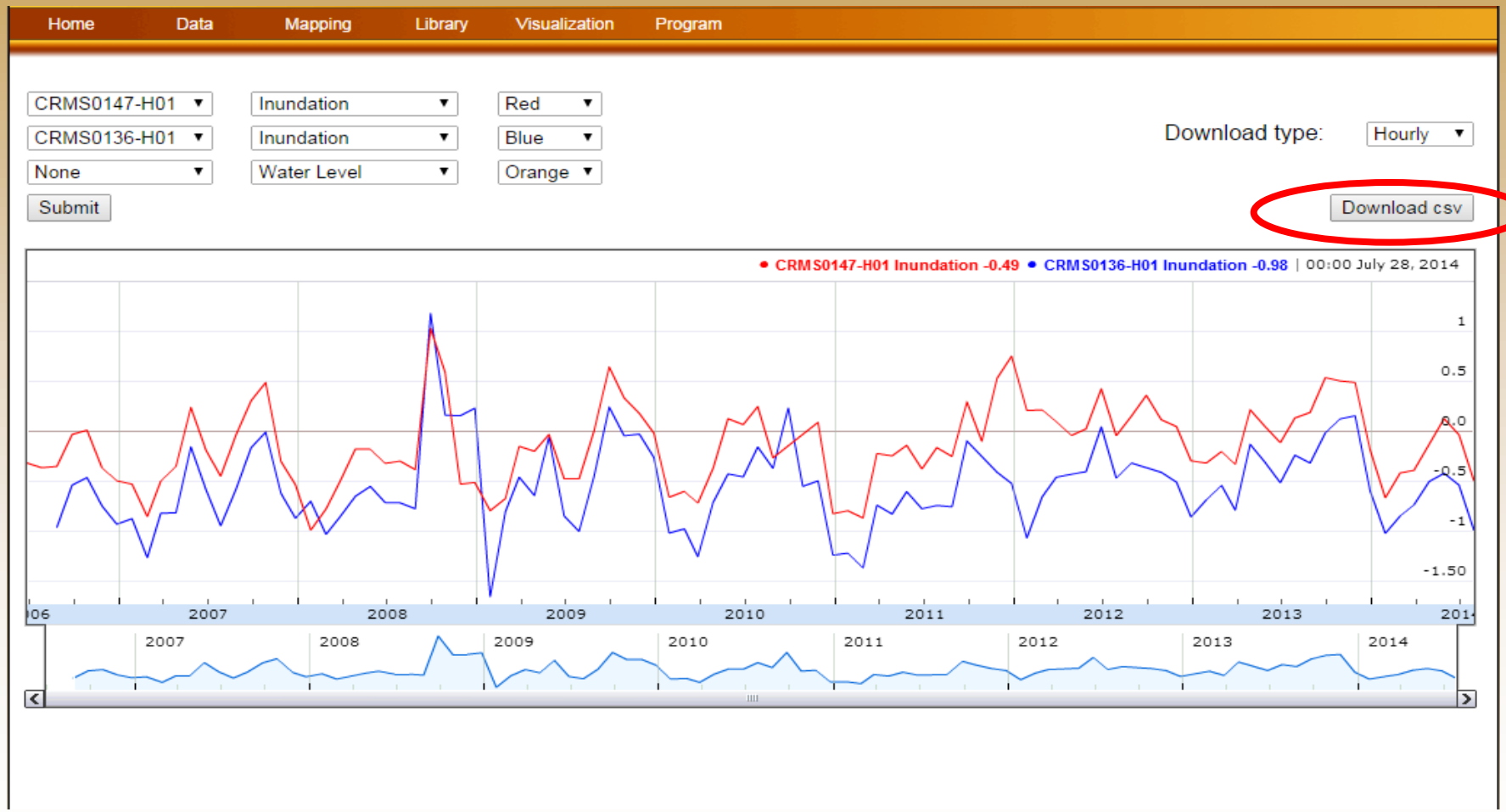
Interactive Hydro Chart – full period of record shows monthly averages



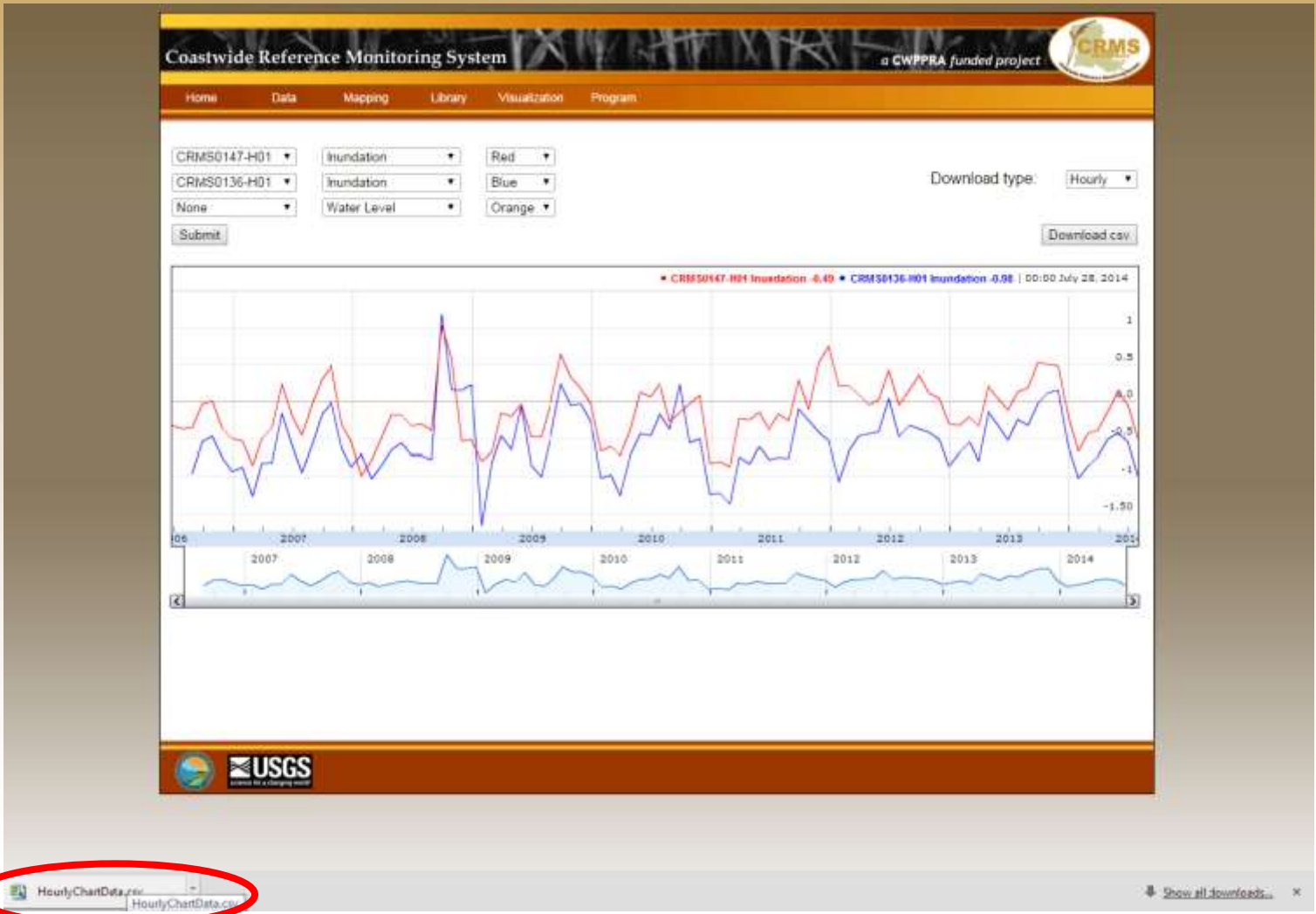
Interactive Hydro Chart – smaller time range increases frequency of visualized data (i.e., hourly vs. monthly)



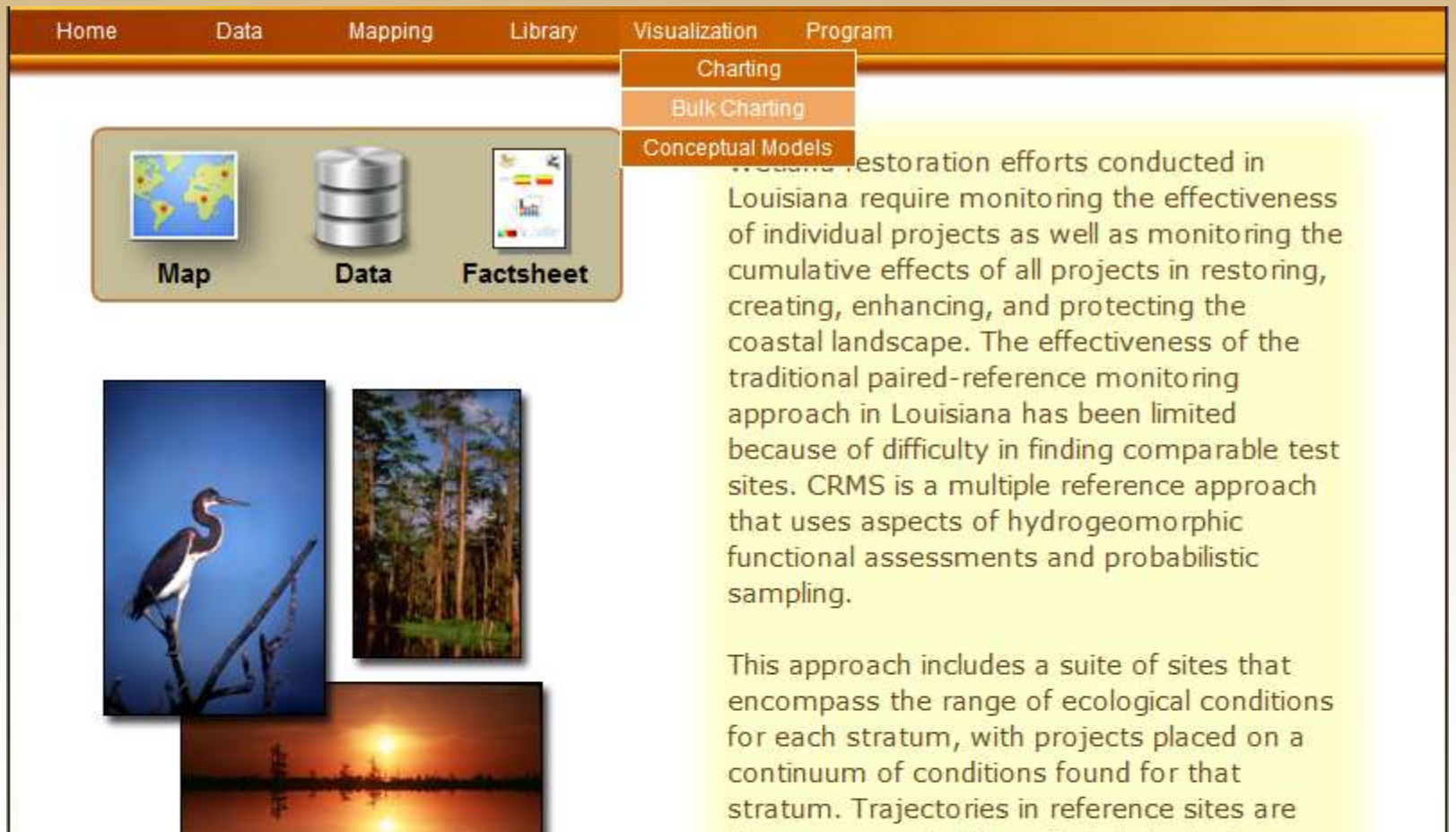
Interactive Hydro Chart – Download a .csv file of the data in the chart. (hourly, daily, monthly)



Interactive Hydro Chart – .csv is downloaded to the download folder located on the computer.



Bulk charting



Bulk Charting

Previous Charting Version

Charting | Bulk Charting | Data Download | Reporting

Bulk Charting

- Hydro
  - Water Level Range
  - Hydro Completeness
  - Salinity
  - Water Level
  - Temperature
  - Continuous
  - Site Hydro Index
  - Soil Porewater
  - Precipitation
- Vegetation
- Soil
- Spatial
- Report Card Charts

Water Year is October 1 - September 30

Scale: Station

Date Range:
2/25/1987 - 3/11/2014

Min Date: 01/01/2001

Max Date: 12/31/2005

Apply Date Filter

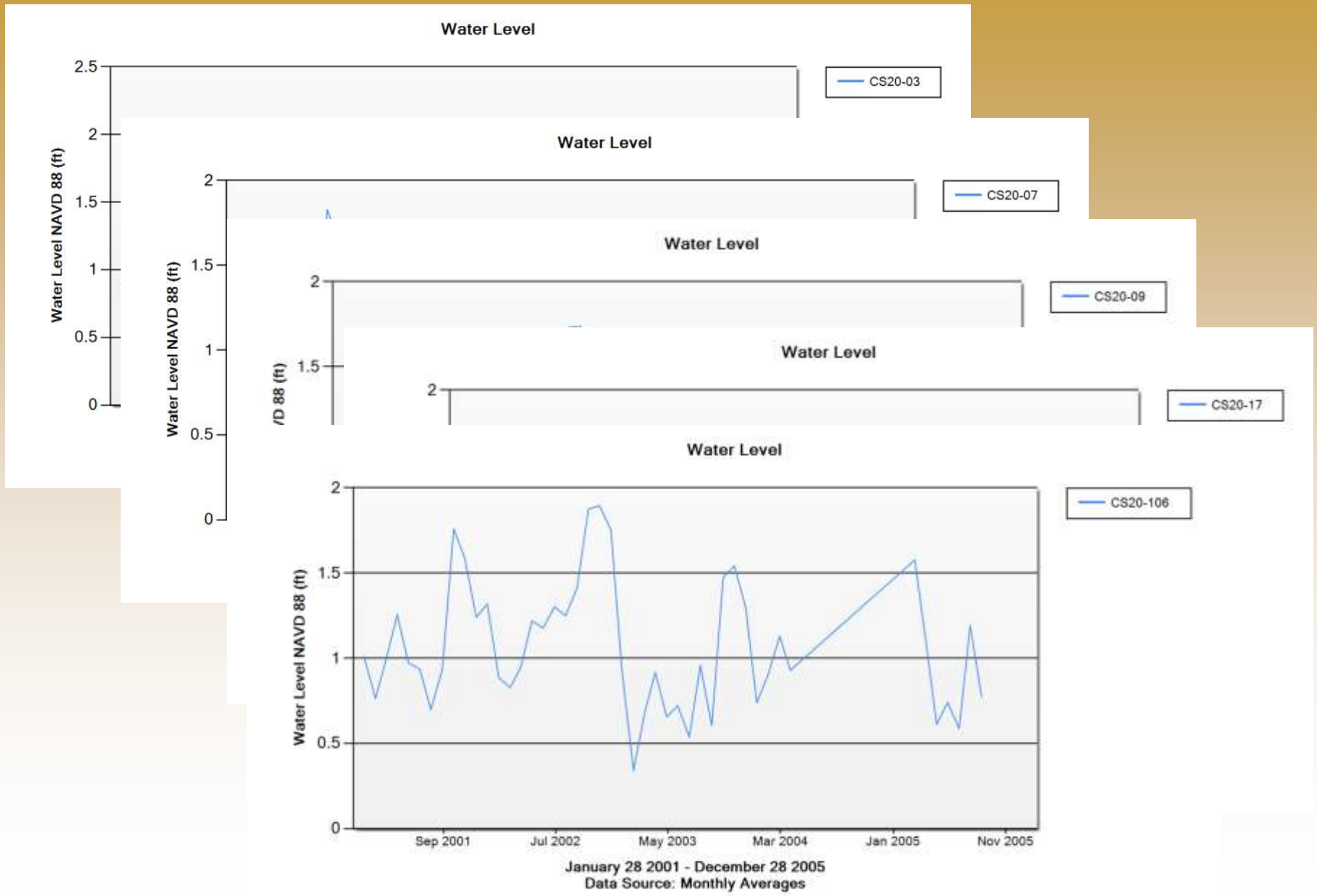
Basin: All Basins Project: CS-20

Select All	Deselect All
CS20-14R	CS20-03
CS20-15R	CS20-07
	CS20-09
	CS20-106
	CS20-17

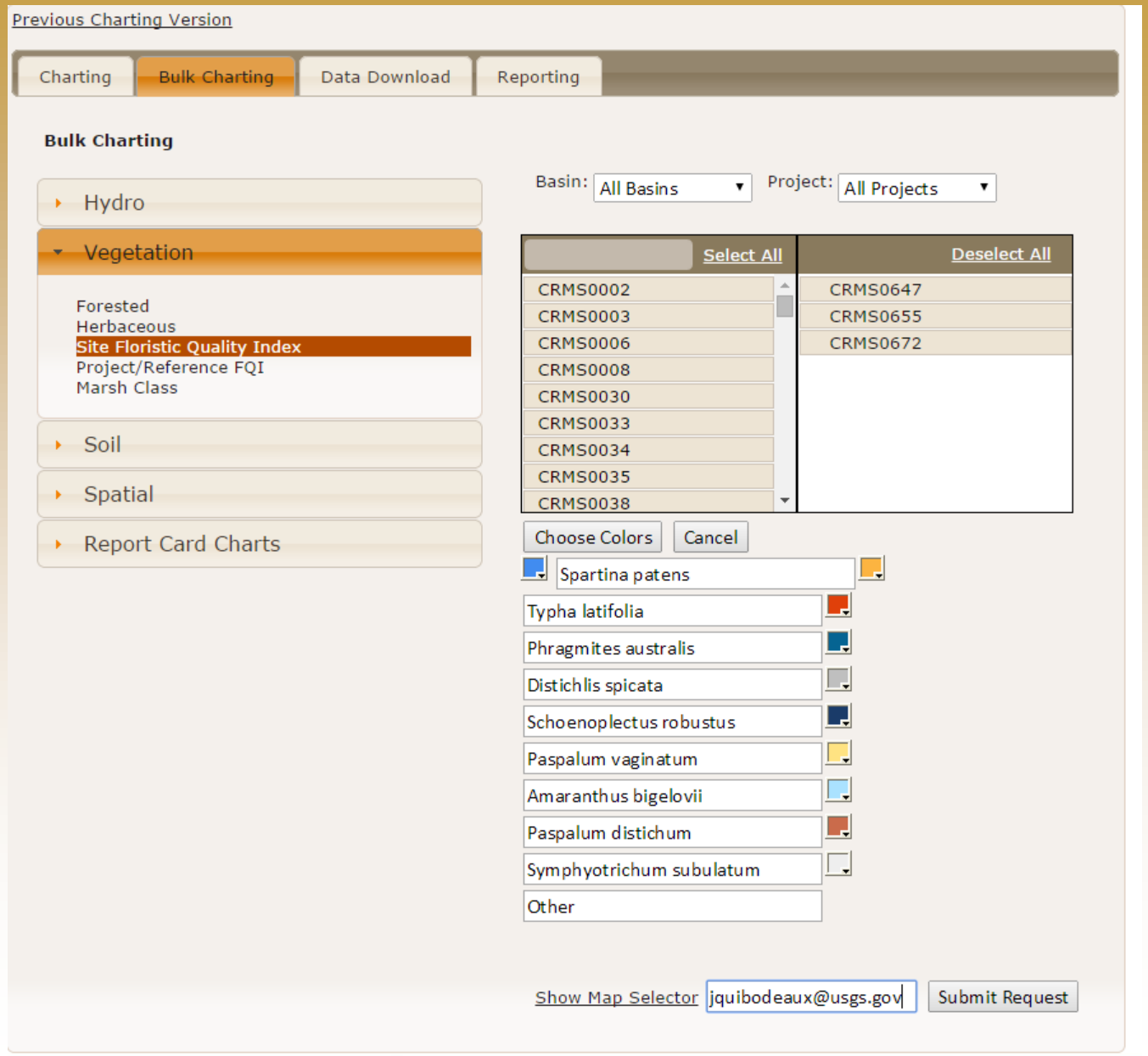
Show Map Selector

Submit Request

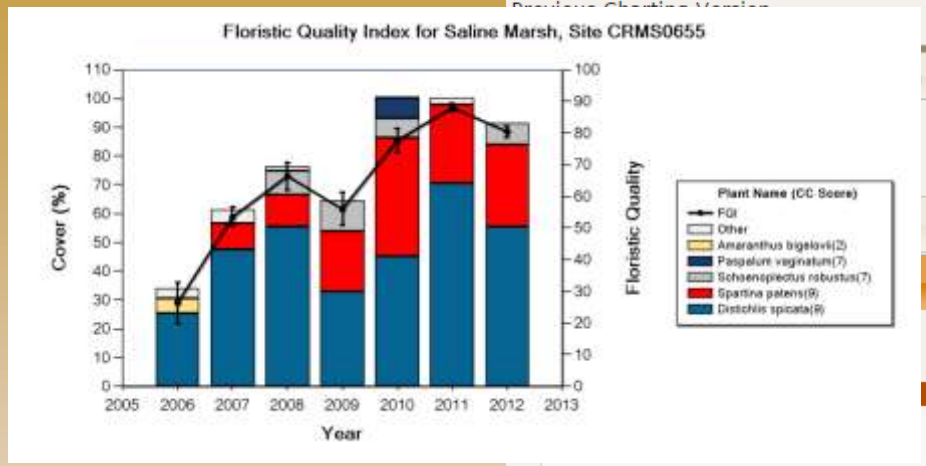
Bulk Charting

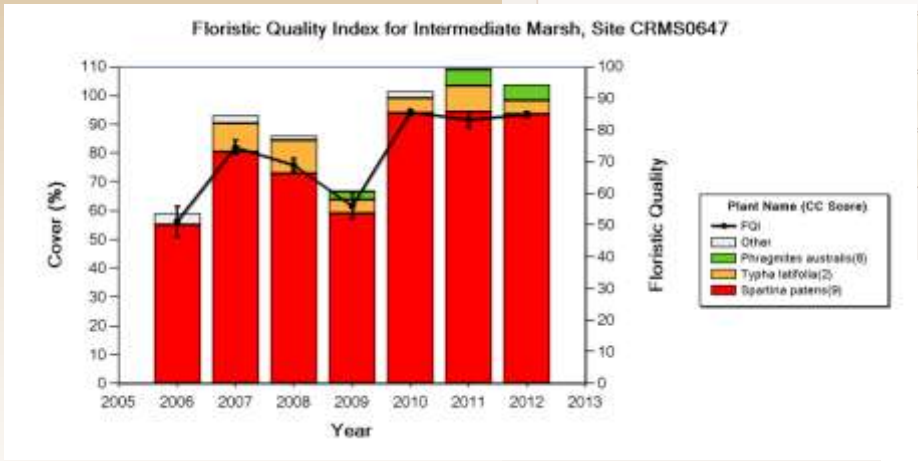


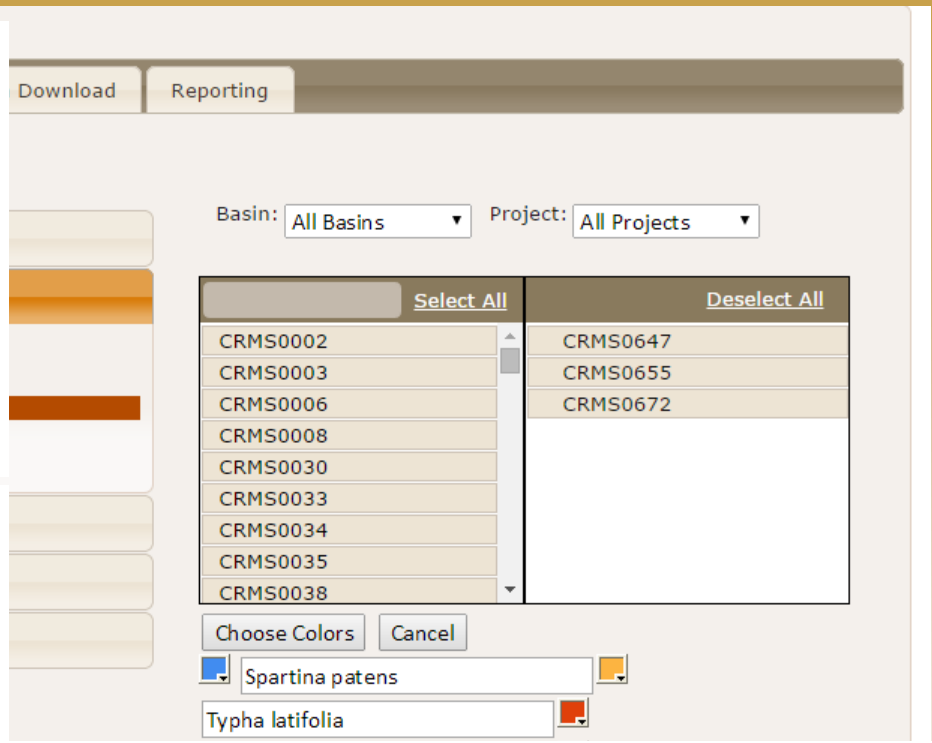
Bulk Charting

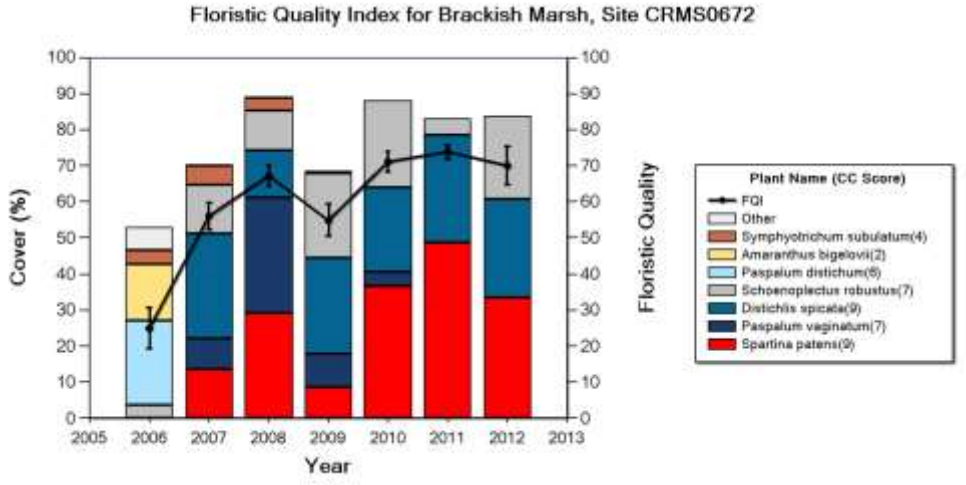


Bulk Charting

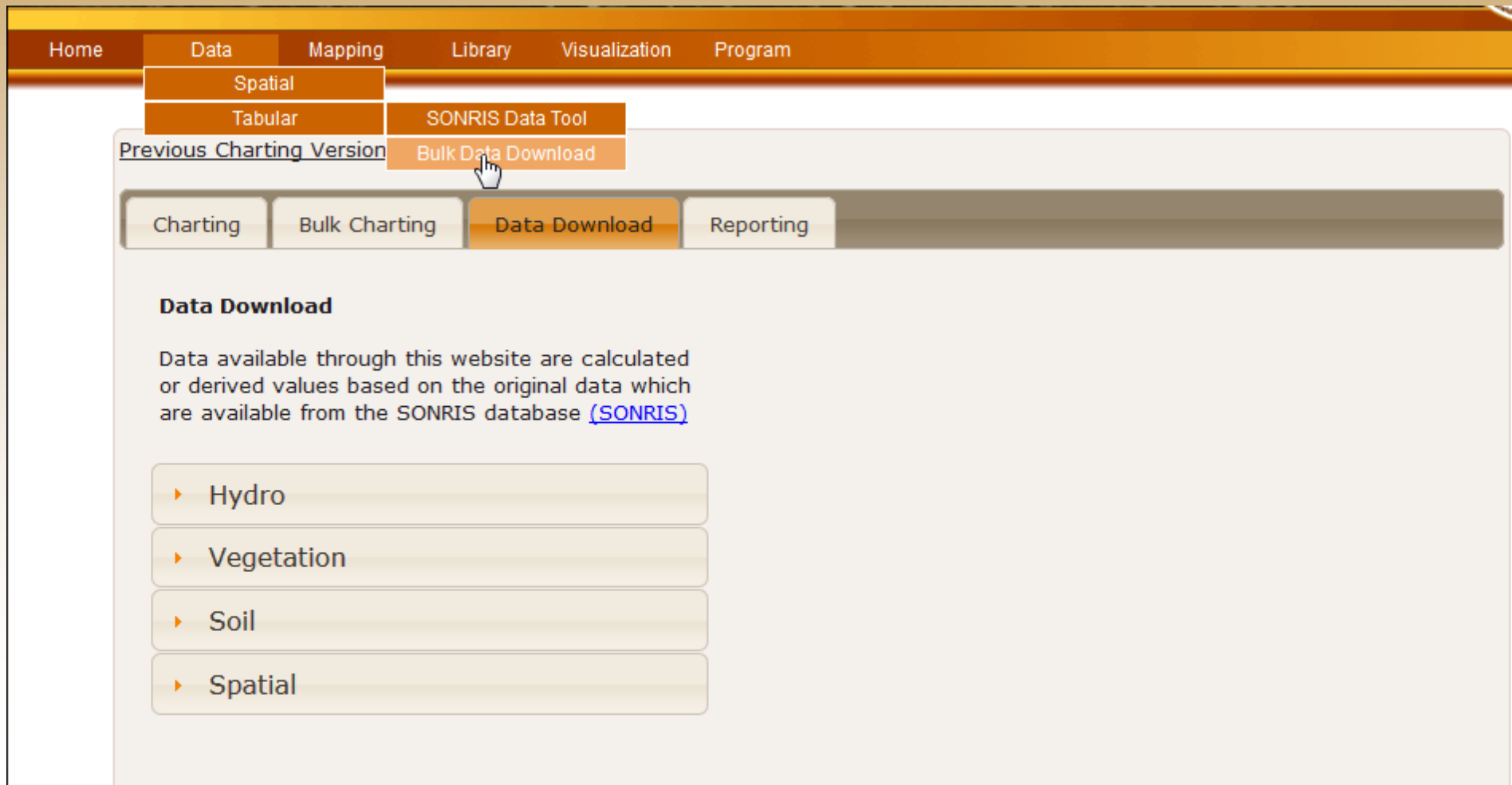








CRMS Data Download



Data Download

Previous Charting Version

Charting | Bulk Charting | Data Download | Reporting

Data Download

Data available through this website are calculated or derived values based on the original data which are available from the SONRIS database (SONRIS)

- Hydro
  - Hydro Averages
  - Hydro Index
  - Percent Flooded
  - Water Level Range
- Vegetation
- Soil
- Spatial

Water Year is October 1 - September 30

Year:

Select All	Deselect All
2007	
2008	
2009	
2010	
2011	
2012	
2013	

Submit

Data Download

Previous Charting Version

Charting | Bulk Charting | Data Download | Reporting

Data Download

Data available through this website are calculated or derived values based on the original data which are available from the SONRIS database (SONRIS)

- Hydro
  - Hydro Averages
  - Hydro Index
  - Percent Flooded
  - Water Level Range
- Vegetation
- Soil
- Spatial

Water Year is October 1 - September 30

Year:

Select All	Deselect All
	2007
	2008
	2009
	2010
	2011
	2012
	2013

Submit

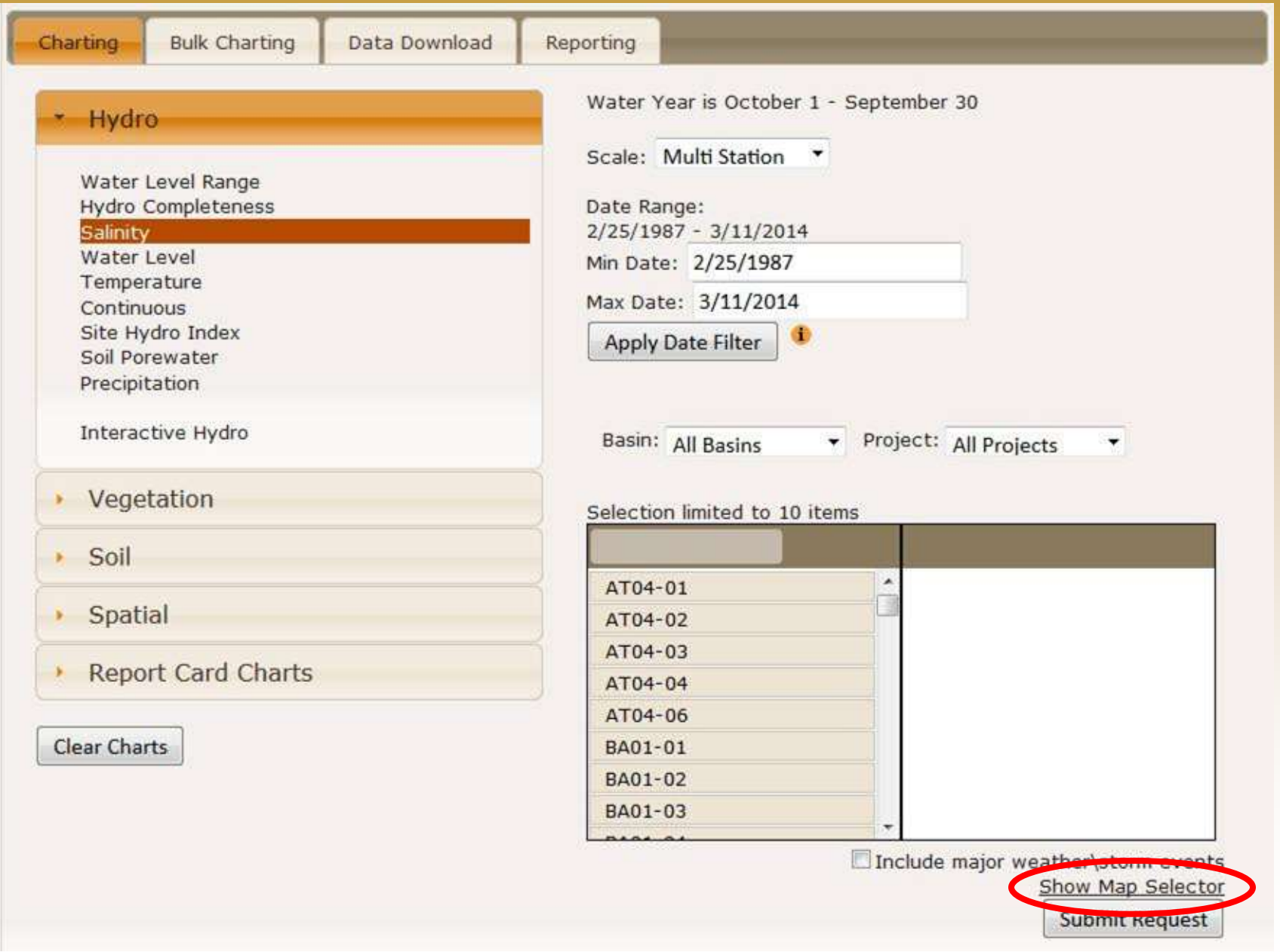
Basin: All Basins ▾ Project: All Projects ▾

Select All	Deselect All
CRMS0002	CRMS0030
CRMS0003	CRMS0033
CRMS0006	CRMS0034
CRMS0047	CRMS0035
CRMS0056	CRMS0038
CRMS0058	CRMS0039
CRMS0061	CRMS0046
CRMS0063	
CRMS0065	

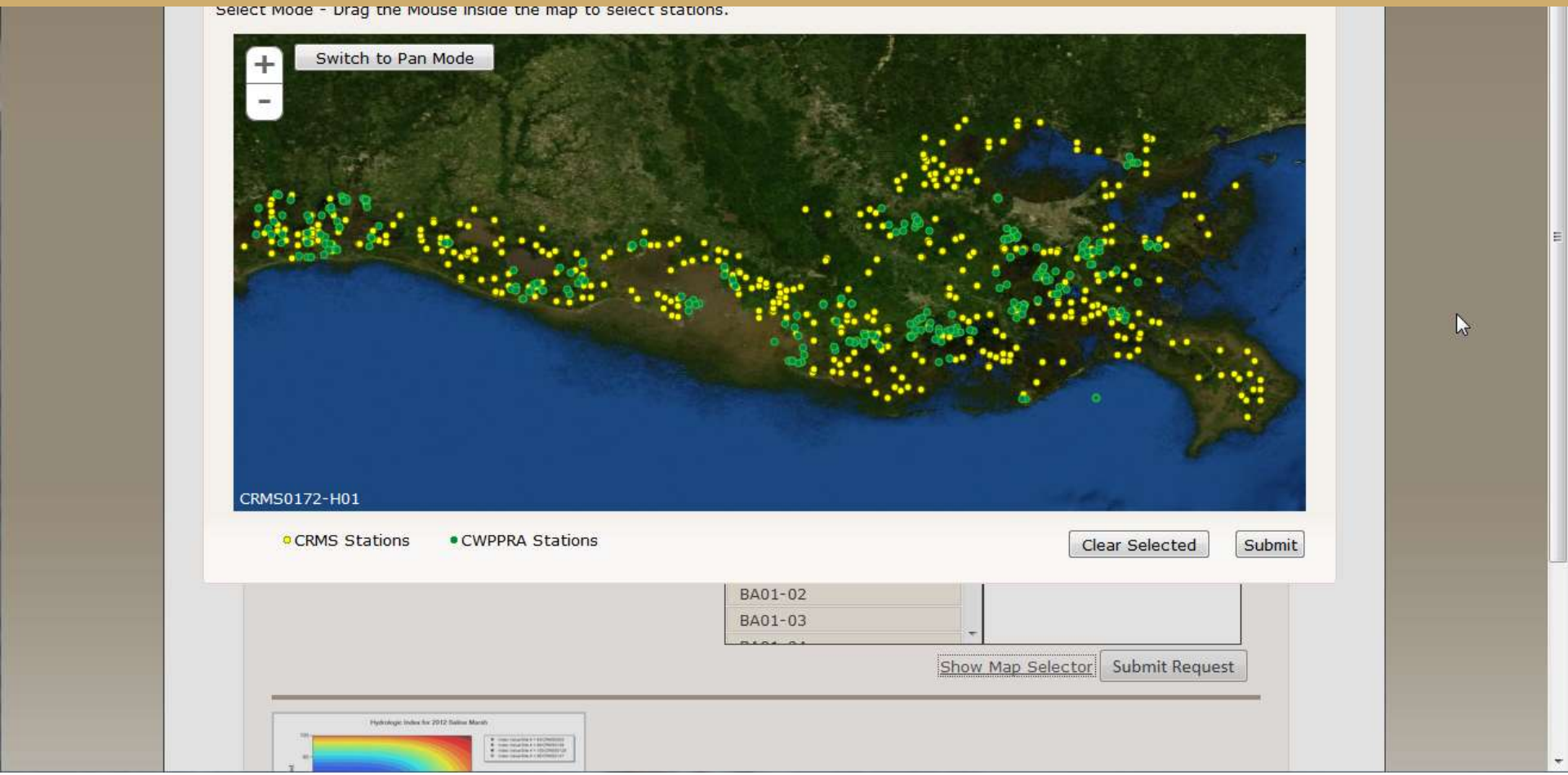
Show Map Selector Email Address: youremail@email.com

Submit Request

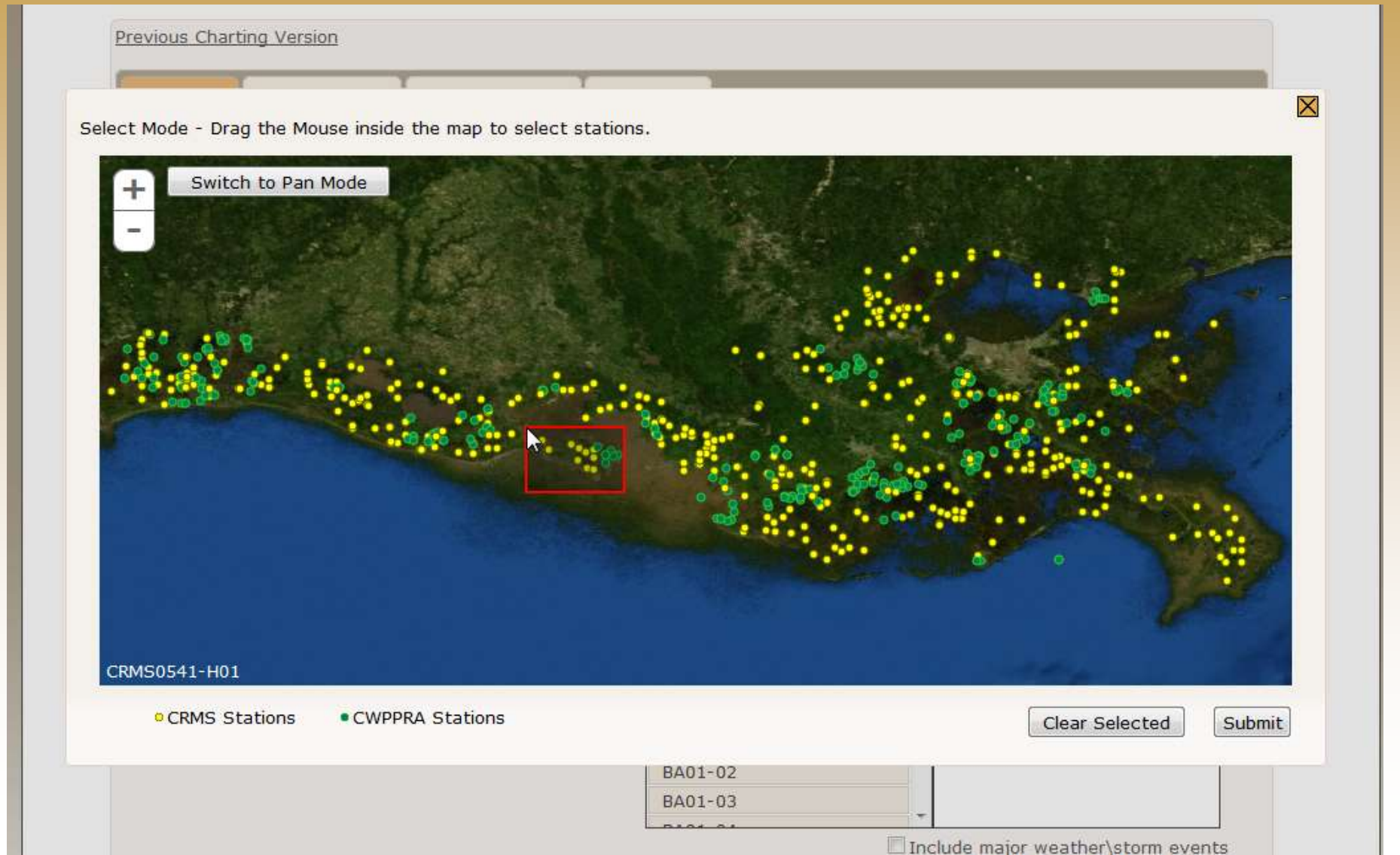
Spatial selection has been added to Charting



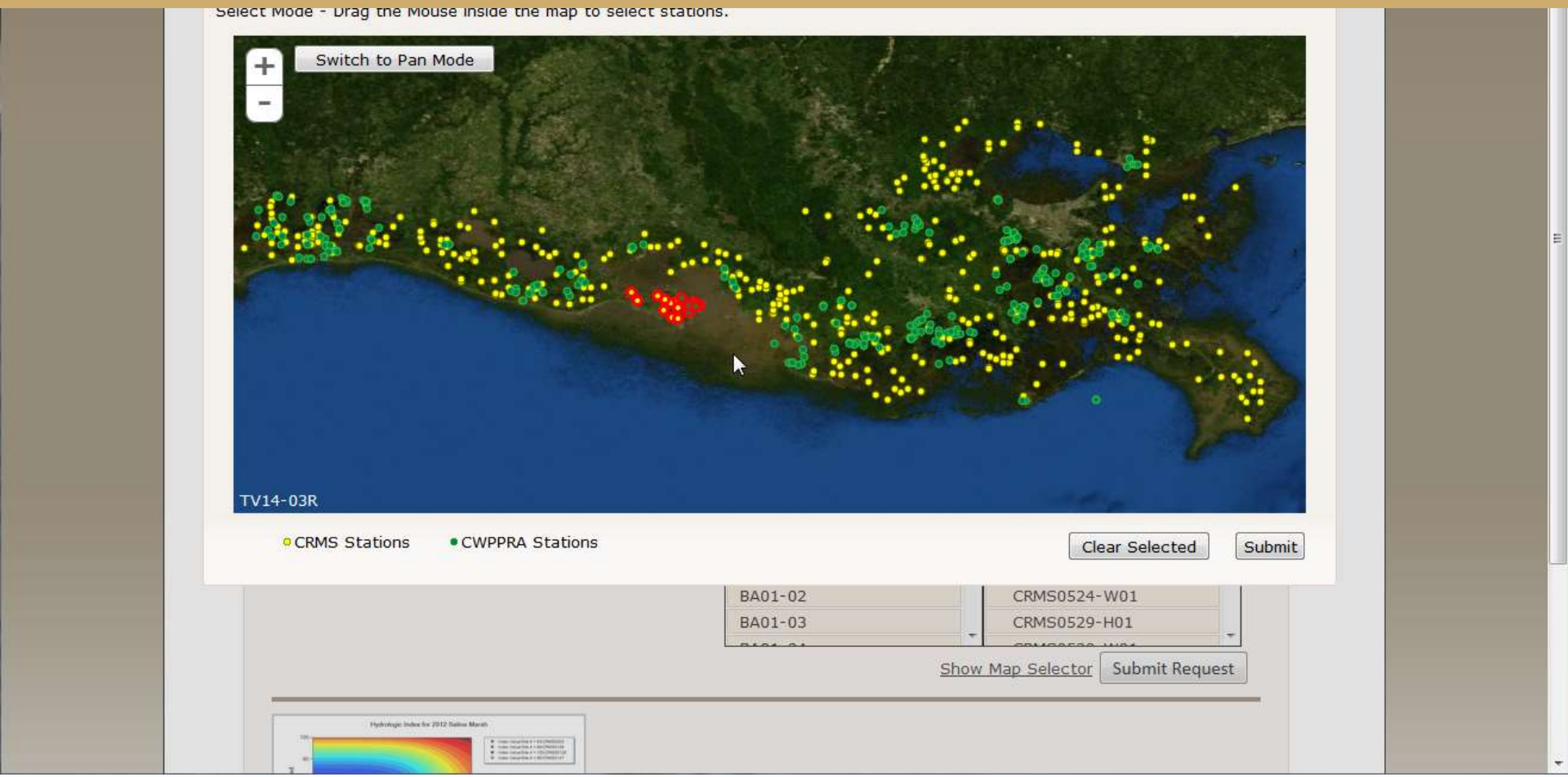
Spatial selection has been added to Charting



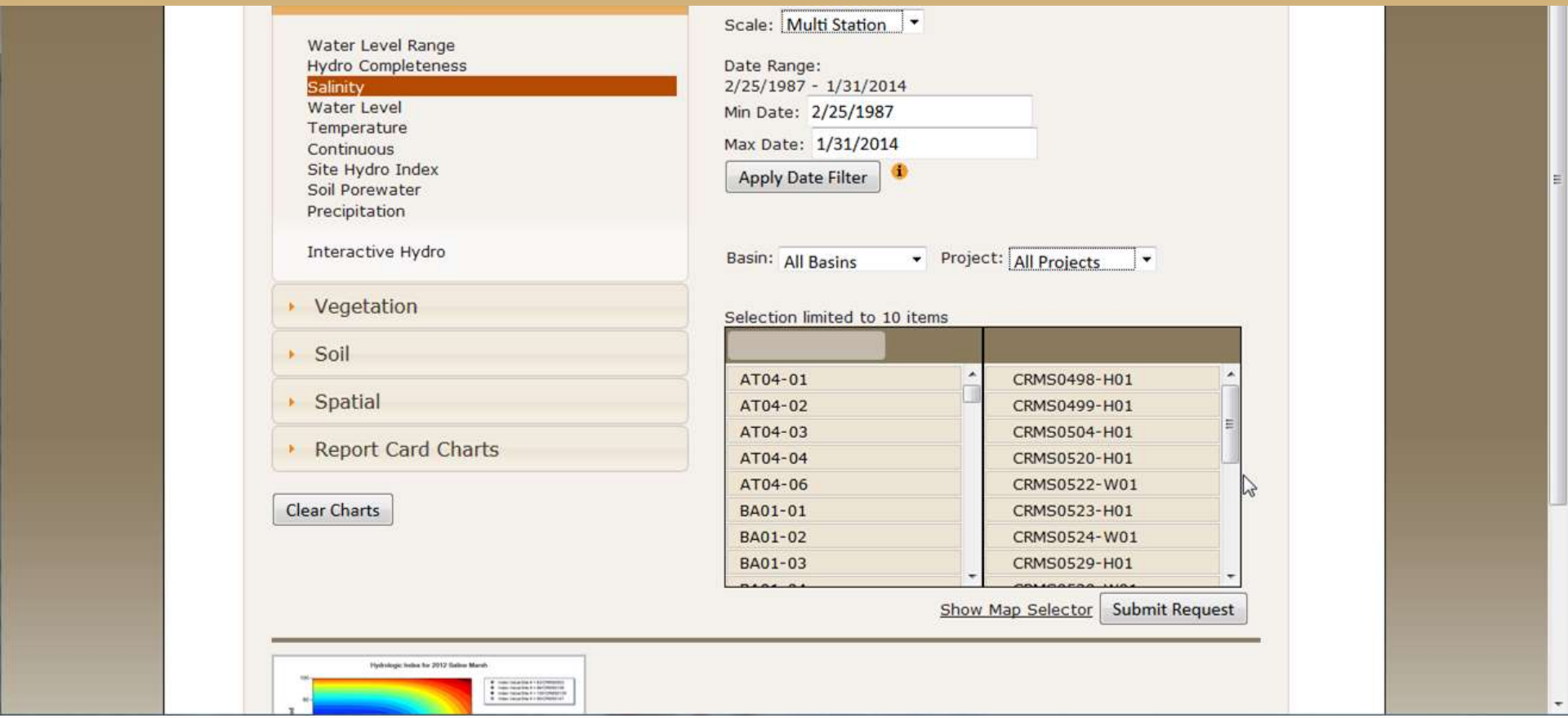
Spatial selection has been added to Charting



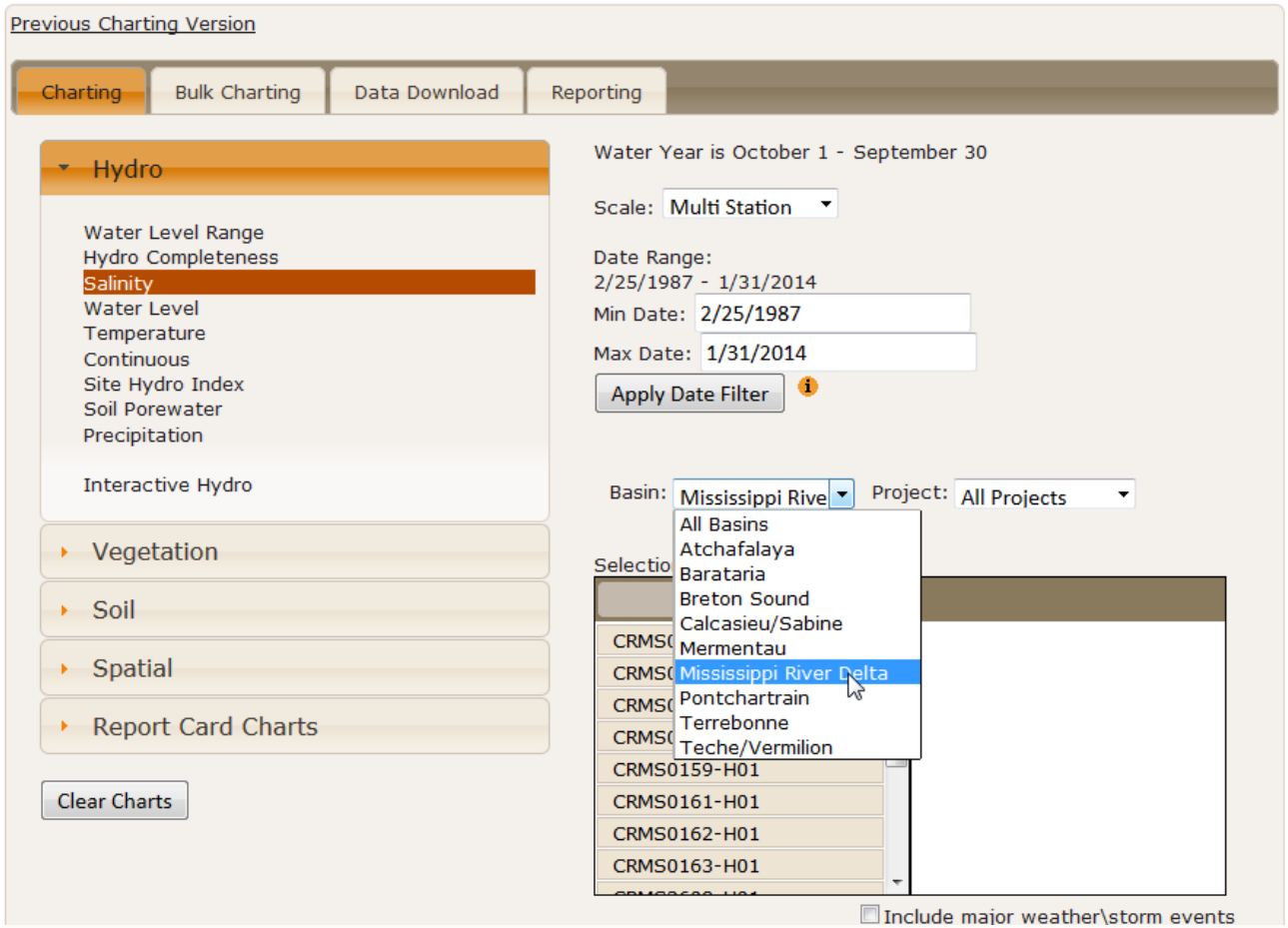
Spatial selection has been added to Charting



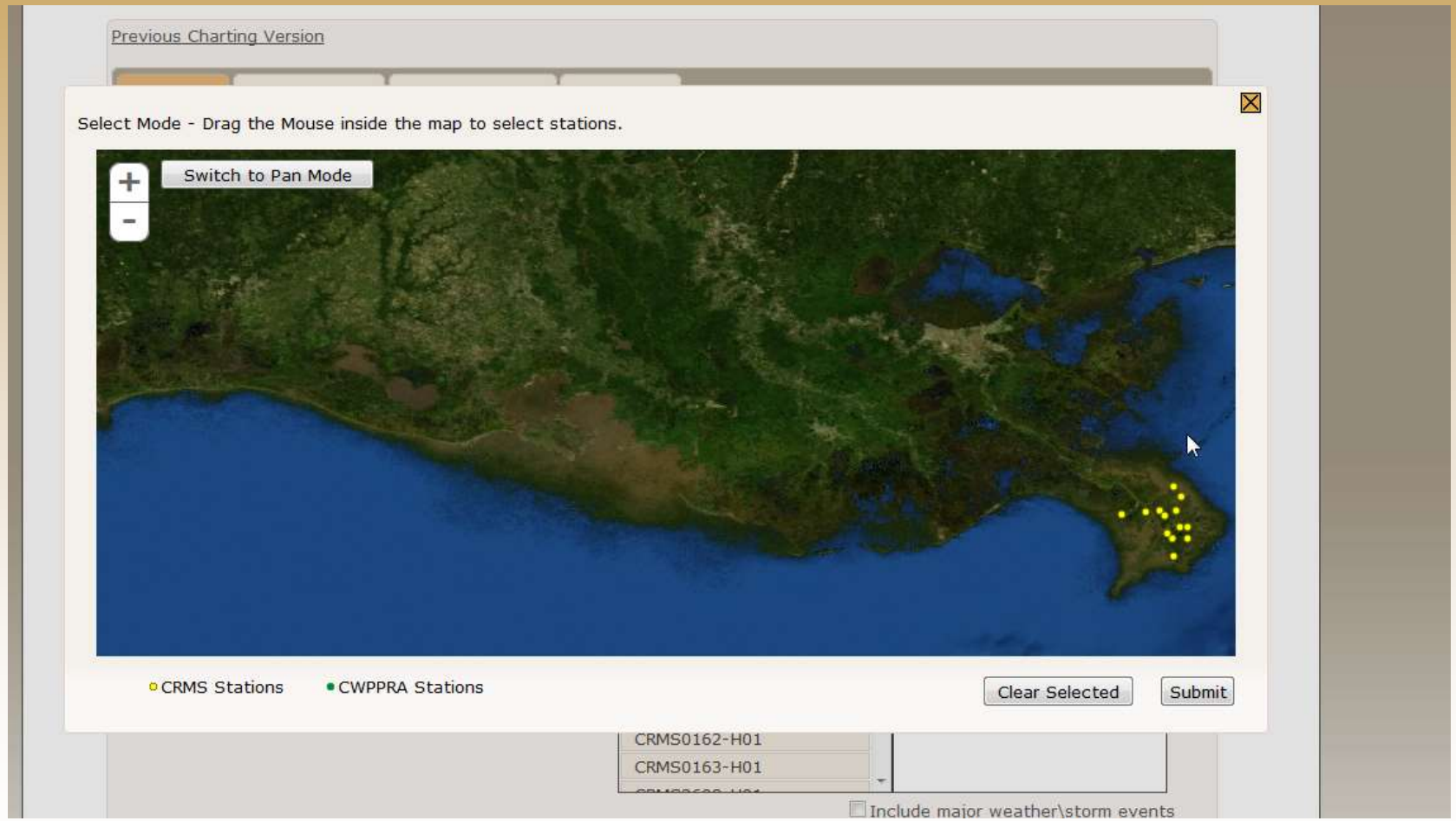
Spatial selection has been added to Charting



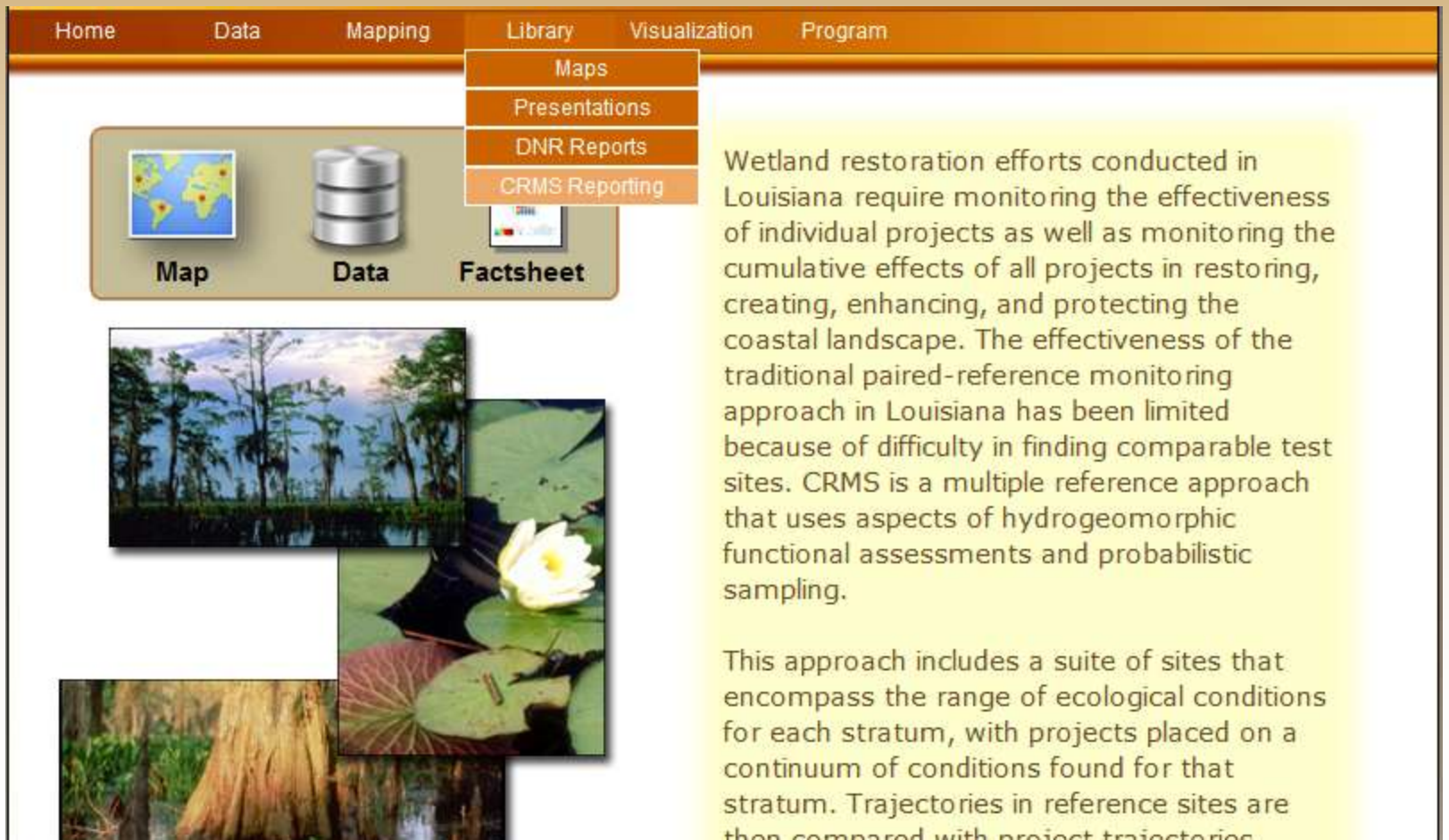
Spatial selection has been added to Charting



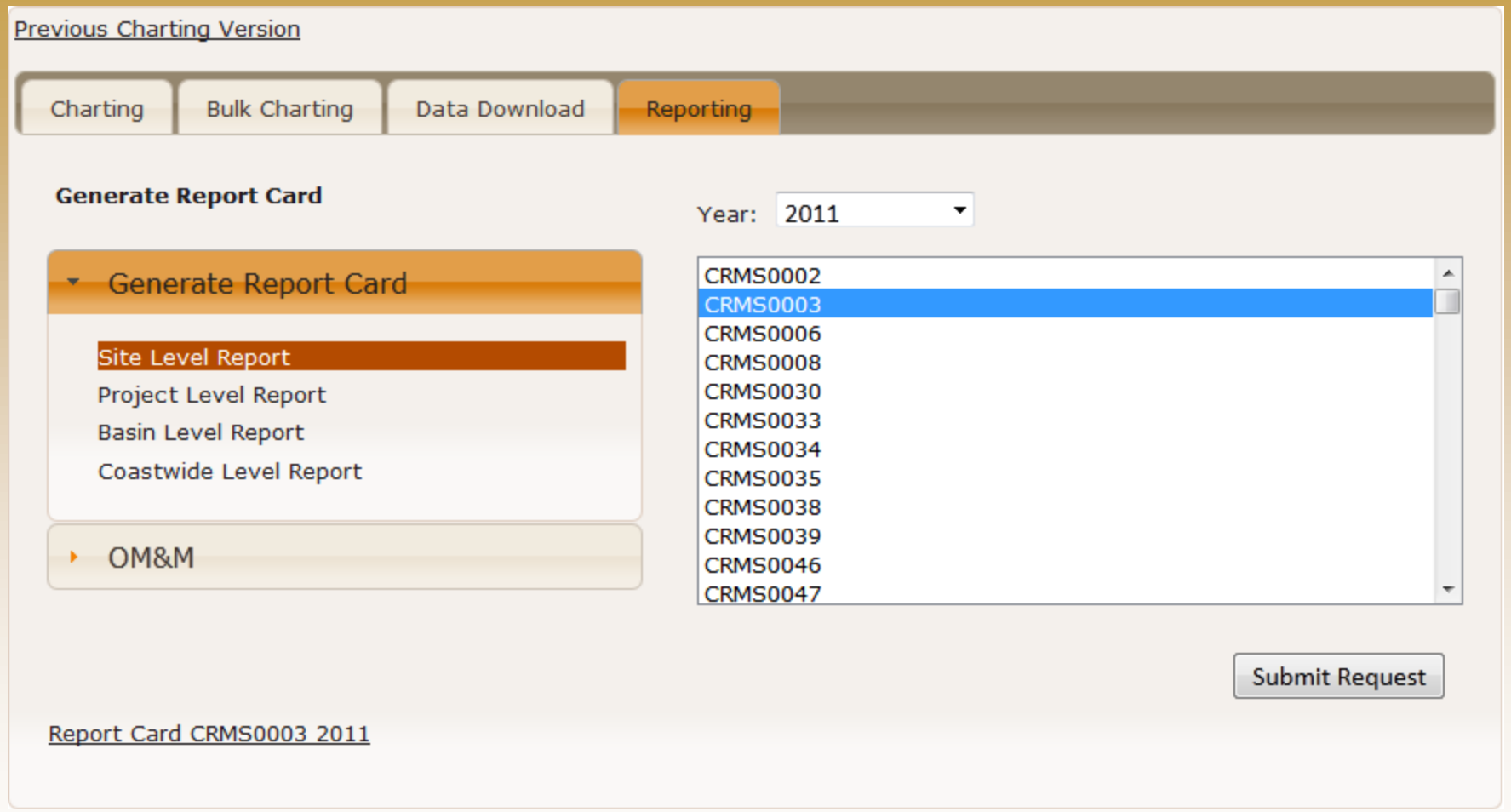
Spatial selection has been added to Charting



CRMS Report Card



Reporting


Previous Charting Version
Charting
Bulk Charting
Data Download
Reporting
Generate Report Card
Year: 2011
Generate Report Card
Site Level Report
Project Level Report
Basin Level Report
Coastwide Level Report
OM&M
CRMS0002
CRMS0003
CRMS0006
CRMS0008
CRMS0030
CRMS0033
CRMS0034
CRMS0035
CRMS0038
CRMS0039
CRMS0046
CRMS0047
Submit Request
Report Card CRMS0003 2011

Reporting

Site Scale Assessment: CRMS0003

The following graphics provide information about t
graphics present an assessment of how aspects o
relative to other sites within a similar marsh type, t

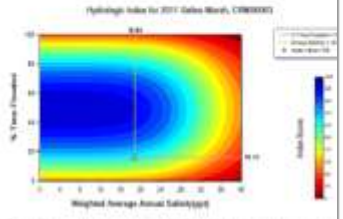


Figure 8. Hydrologic index score (indicated by color scale) based on th
combined influences of average annual salinity (horizontal axis) and
flood duration (vertical axis).

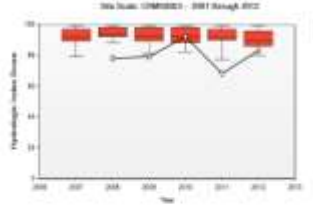


Figure 9. A time series of HI scores for a CRMS site relative to the box
plot of the scores for all the sites within the same marsh type each year.

Literature Cited

Cahoon, D.R., D.J. Reed, and J.W. Day, Jr. 1995. Estimating shallow subsidence in microtidal salt marshes of the southeastern United States: Kaye and Barghoorn revisited. Marine Geology 128: 1-9.

Couvillion, B.R., Barras, J.A., Steyer, G.D., Sleavin, William, Fischer, Michelle, Beck, Holly, Trahan, Nadine, Griffin, Brad, and Heckman, David, 2011, Land area change in coastal Louisiana from 1932 to 2010: U.S. Geological Survey Scientific Investigations Map 3164, scale 1:265,000, 12 p. pamphlet.

Cretini, K.F., and Steyer, G.D. 2011, Floristic Quality Index -- An assessment tool for restoration projects and monitoring sites in coastal Louisiana: U.S. Geological Survey Fact Sheet 2011-3044, 4 p. http://pubs.usgs.gov/fs/2011/3044/.

Cretini, K.F, Visser, J.M., Krauss, K.W., and Steyer, G.D. 2011, Development and use of a floristic quality index for coastal Louisiana marshes. Environmental Monitoring and Assessment.

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Snedden, G.A., and Swenson, E.M., 2012, Hydrologic index development and application to selected Coastwide Reference Monitoring System sites and Coastal Wetlands Planning, Protection and Restoration Act projects: U.S. Geological Survey Open-File Report 2012–1122, 25 p.

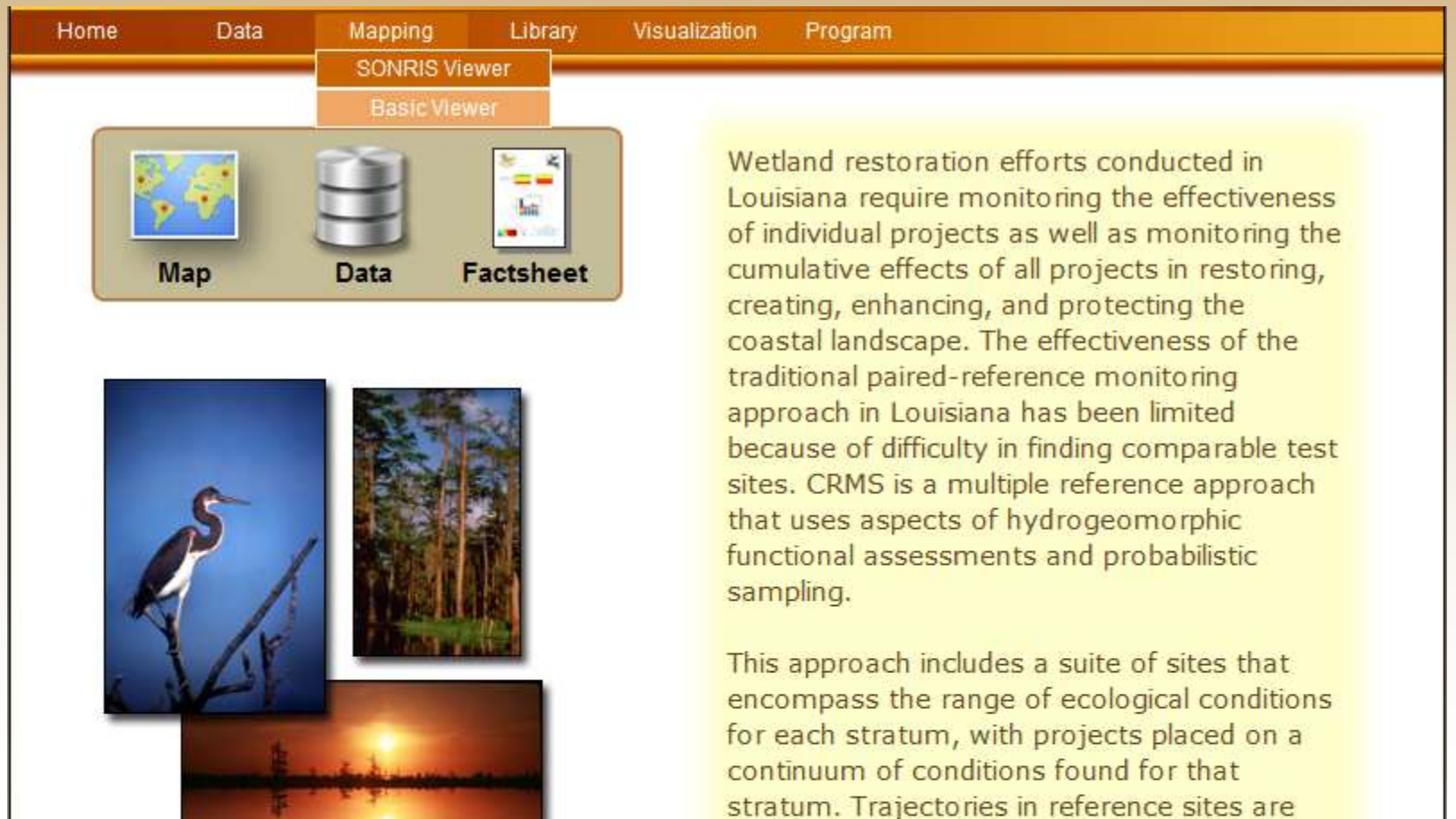
Stagg, C.L., Sharp, L.A., McGinnis, T.E., and Snedden, G.A., 2013, Submergence Vulnerability Index development and application to Coastwide Reference Monitoring System sites and Coastal Wetlands Planning, Protection and Restoration Act projects: U.S. Geological Survey Open-File Report 2013–1163, 13 p.

Steyer, G.D., Sasser, C.E., Visser, J.M., Swensen, E.M., Nyman, J.A., and Raynie, R.C., 2003, A proposed coast-wide reference monitoring system for evaluating wetland restoration trajectories in Louisiana. Environmental Monitoring and Assessment, 81:107-117.

Steyer, G.D., 2010, Coastwide Reference Monitoring System (CRMS): U.S. Geological Survey Fact Sheet 2010-3018, 2 p. (Revised August 2010). http://pubs.usgs.gov/fs/2010/3018/.

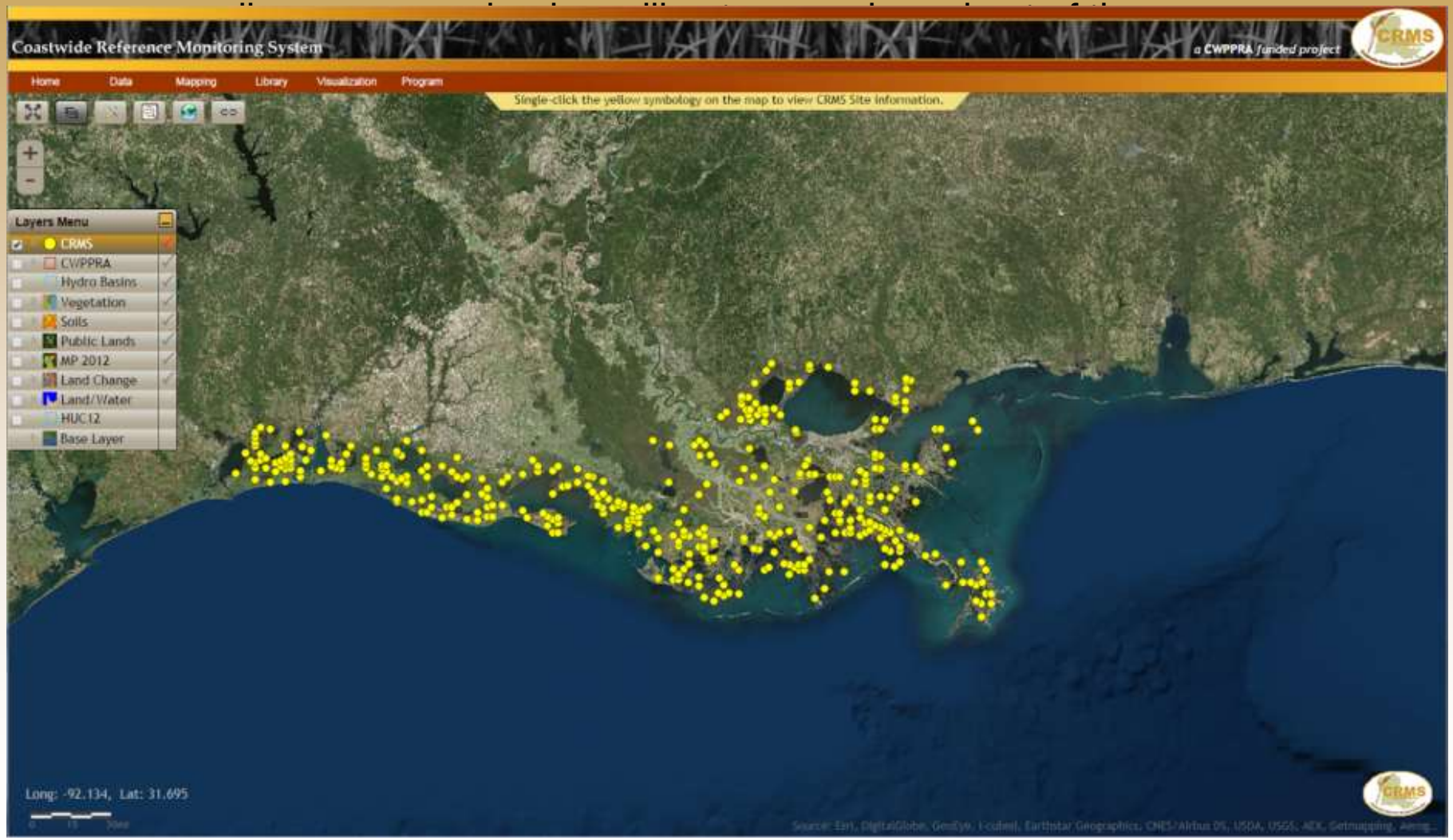
Visser, J.M., Steyer, G.D., Shaffer, G.P., Hoppner, S.S., Reyes E., Keddy, P., Mendelssohn, I.A., and Swarzenski, C., 2003b, Habitat Switching Module, in Louisiana Coastal Area(LCA), La - Ecosystem Restoration: Comprehensive Coastwide Ecosystem.

Using the mapping interface



Map Navigation

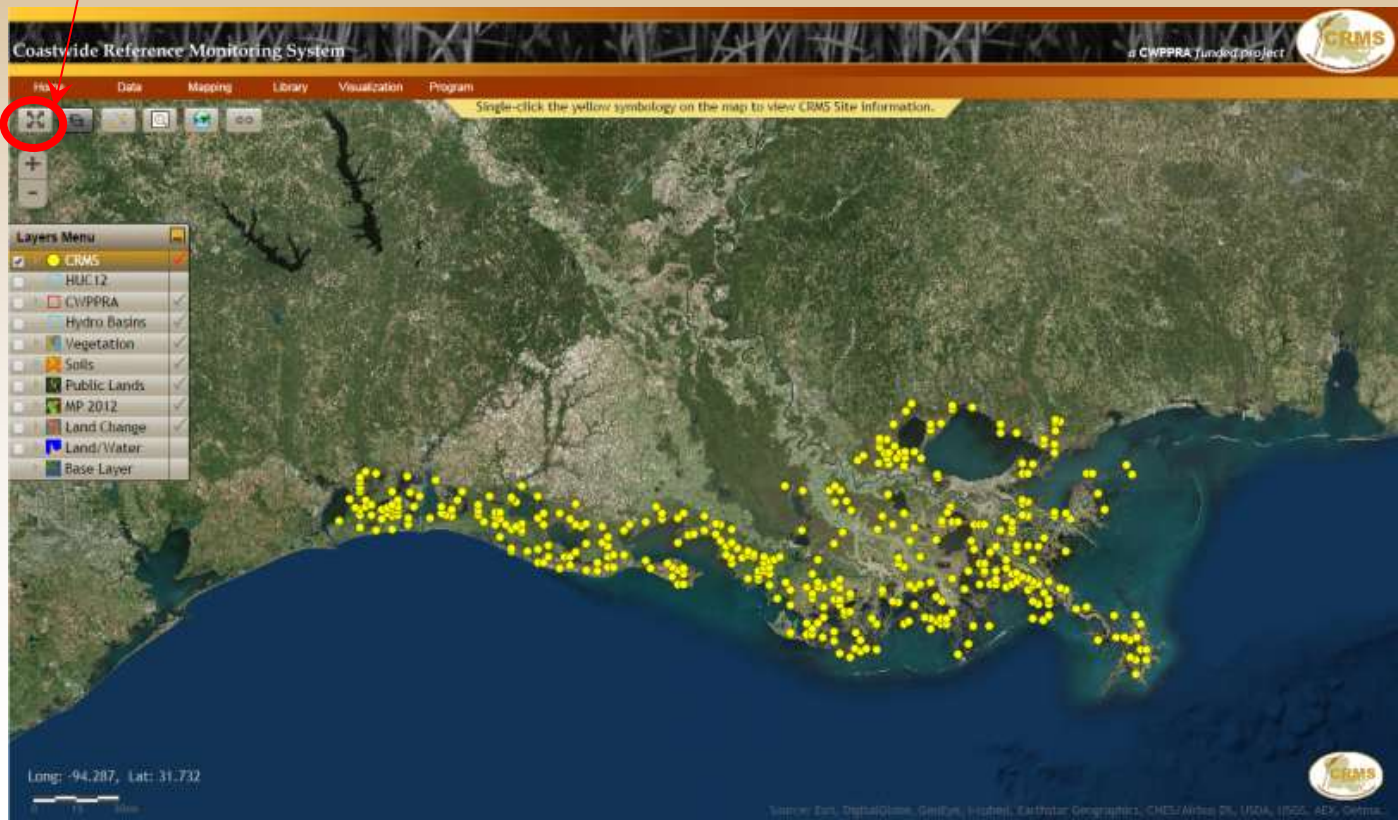
CRMS Viewer now implements ESRI's ArcGIS JavaScript API which



Interface

Full Screen Button hides the top menu.

Full Screen Button changes when the top menu is hidden.



Interface

Layers Button shows and hides the Layers Menu

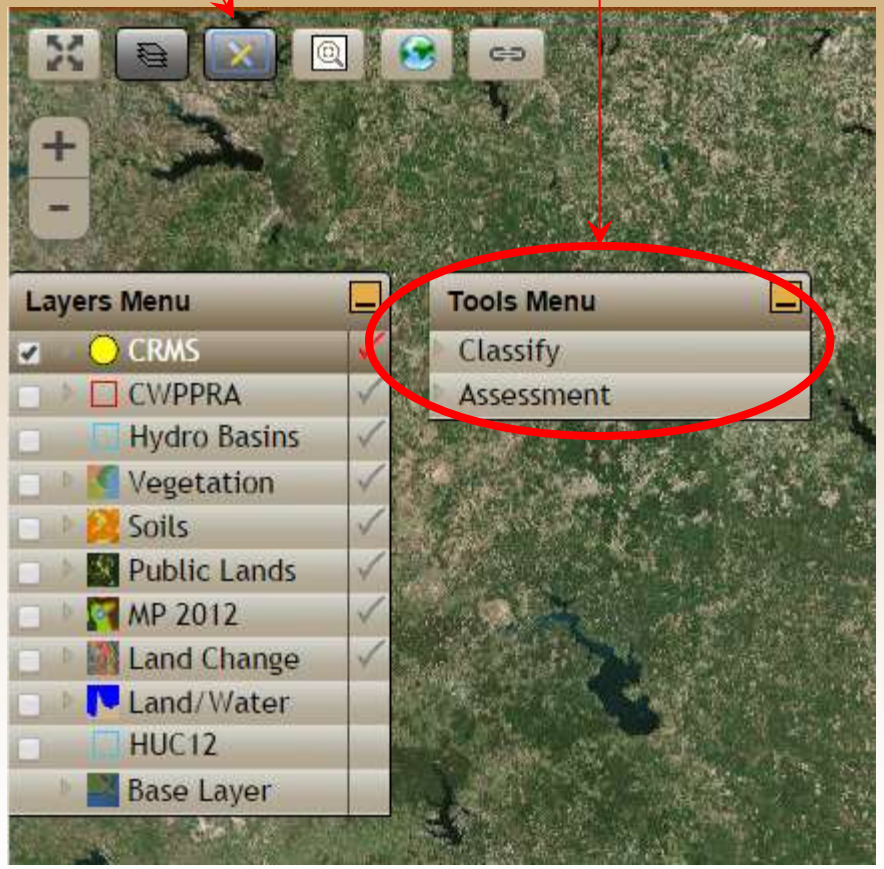
Layers Menu Shown:

Layers Menu Hidden:

Interface

Tools Button darkens when the menu is shown.

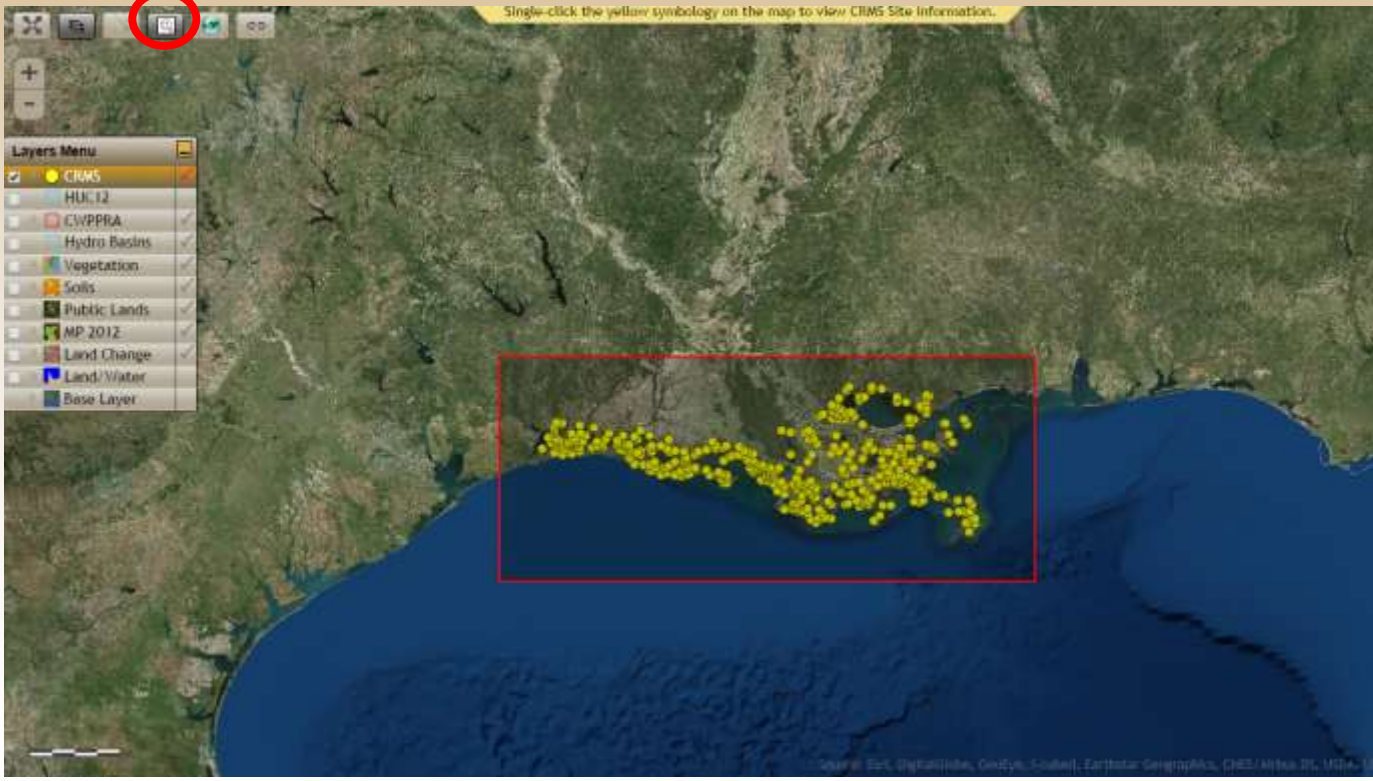
Tools Button brings up the Tools Menu.



Interface

Zoom Button zooms to the rectangle drawn on the map.

The icon darkens when the mouse is in the “zoom” state.



Interface

Zoom To Full Extent Button resets the map back to the original area and zoom level.

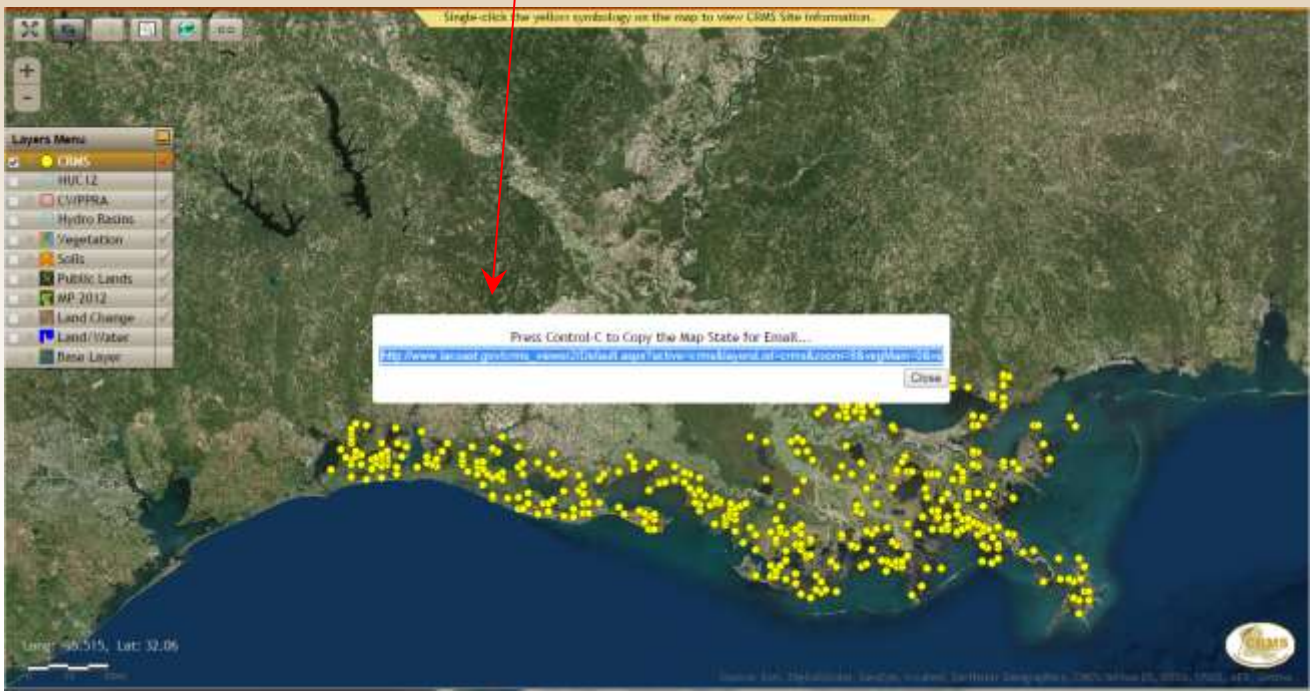
+/- Buttons zoom in and out.

Manila dropdown shows how to interact with the current active layer.

Interface

Used to create a save state on the map.

Link created to save the current state of the map.

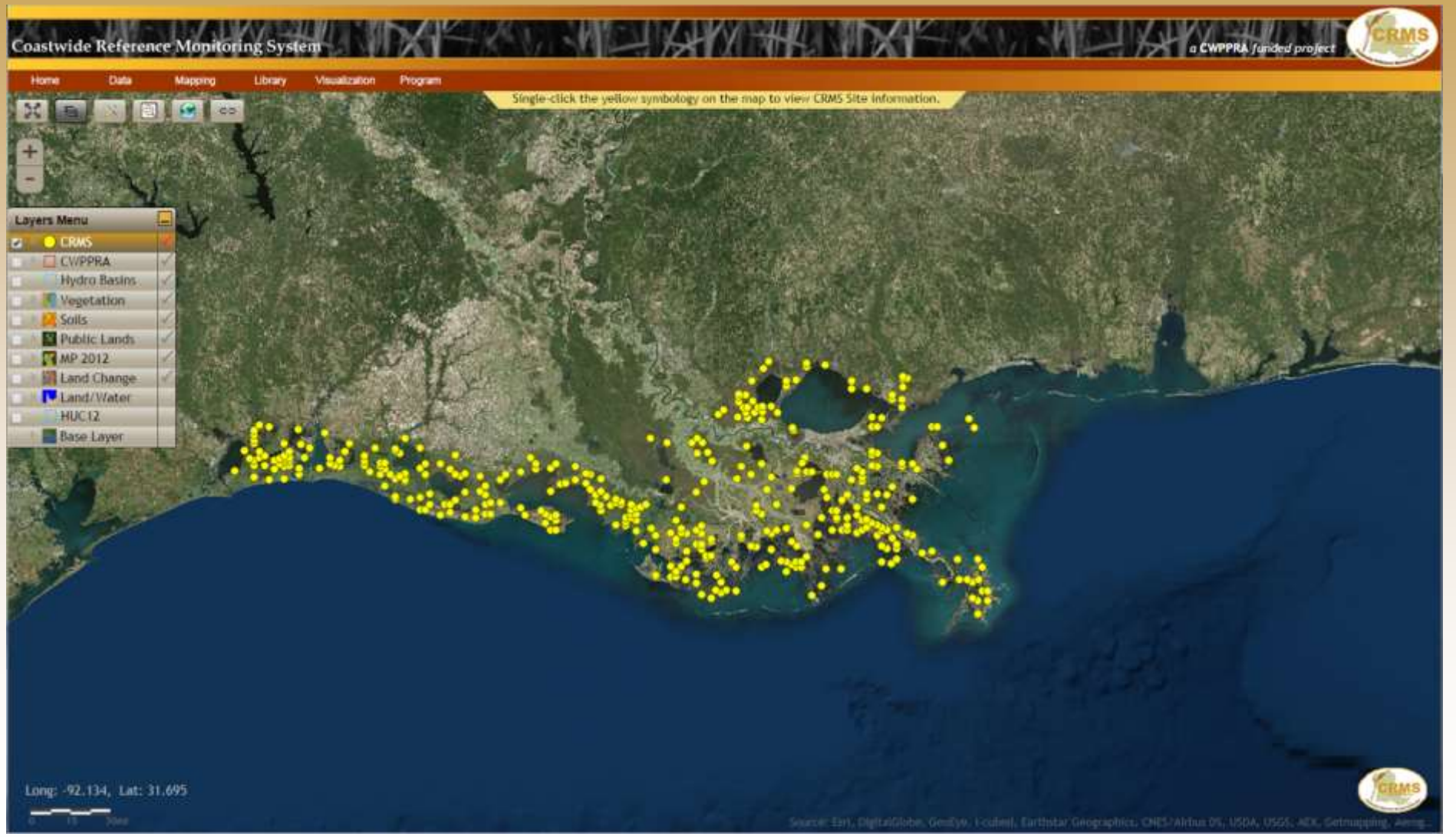


Interface

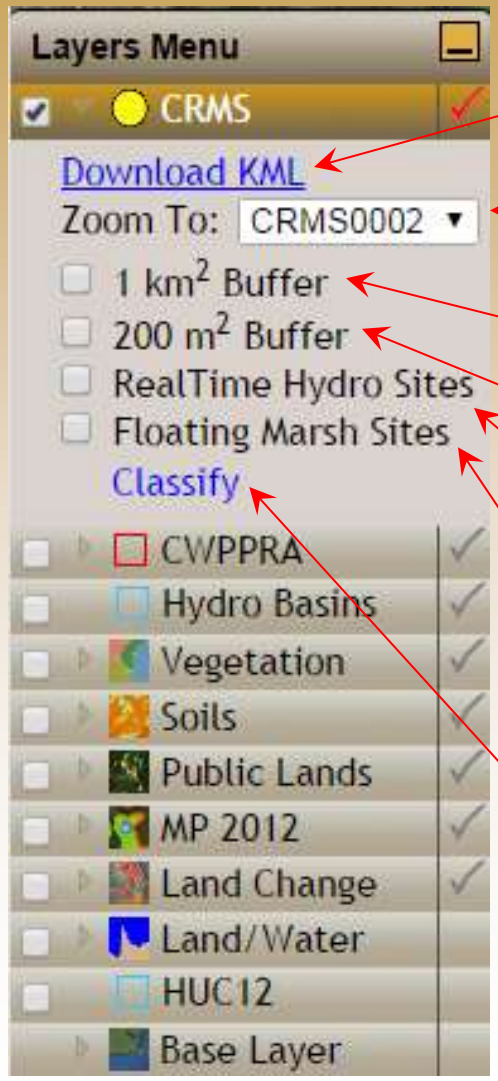
Expand layer to display more layer options.

Make this the current active layer.

CRMS Active Layer



CRMS Active Layer



Download a KML file to used in Google Earth.

Zooms to the site and shows the site information bubble.

Checkbox adds/removes the 1 km^2 Buffer layer to the map.

Checkbox adds/removes the 200 m^2 Buffer layer to the map.

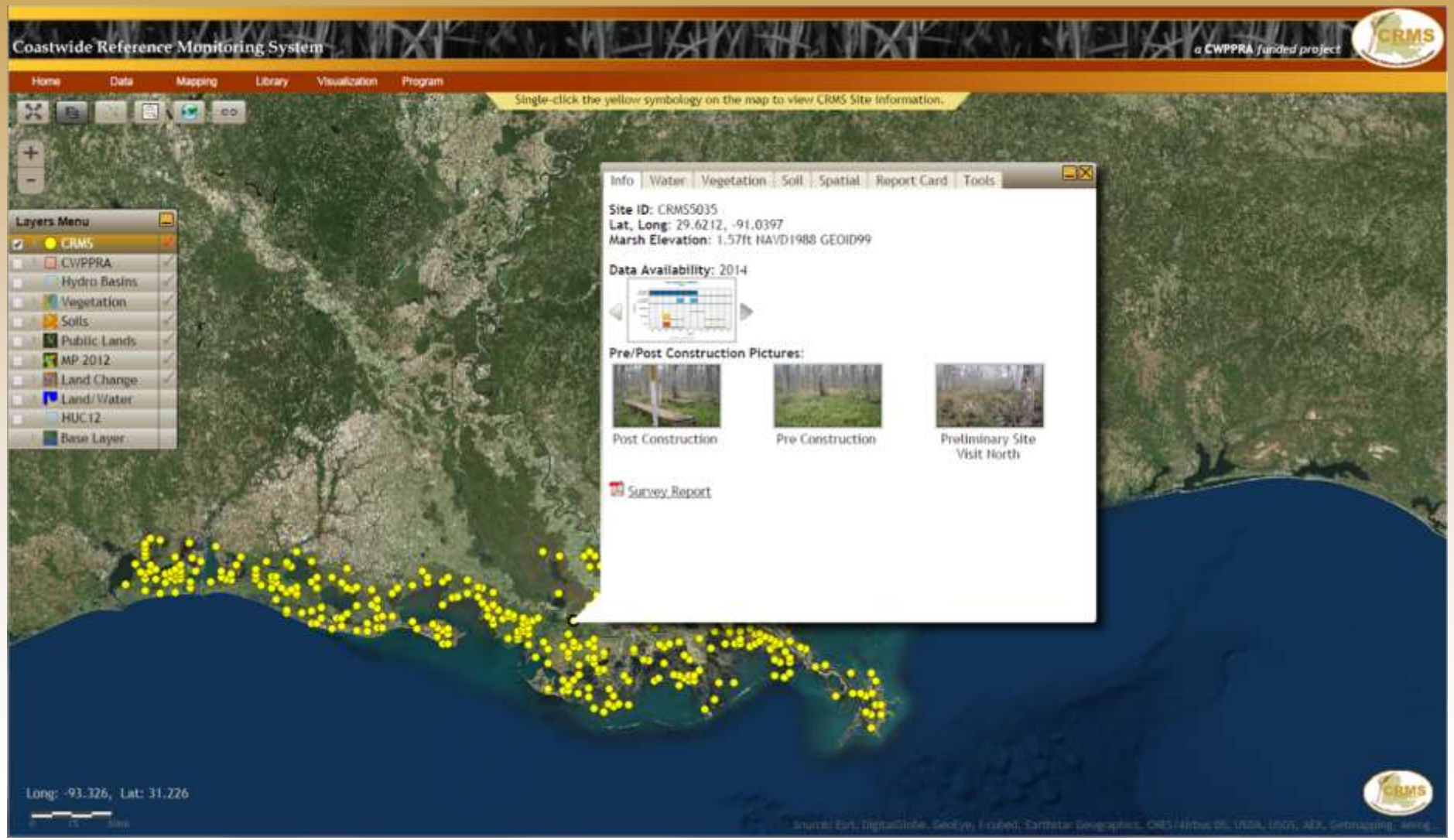
Checkbox adds/removes the Real Time Hydro Sites layer to the map.

Checkbox adds/removes the Floating Marsh Sites layer to the map.

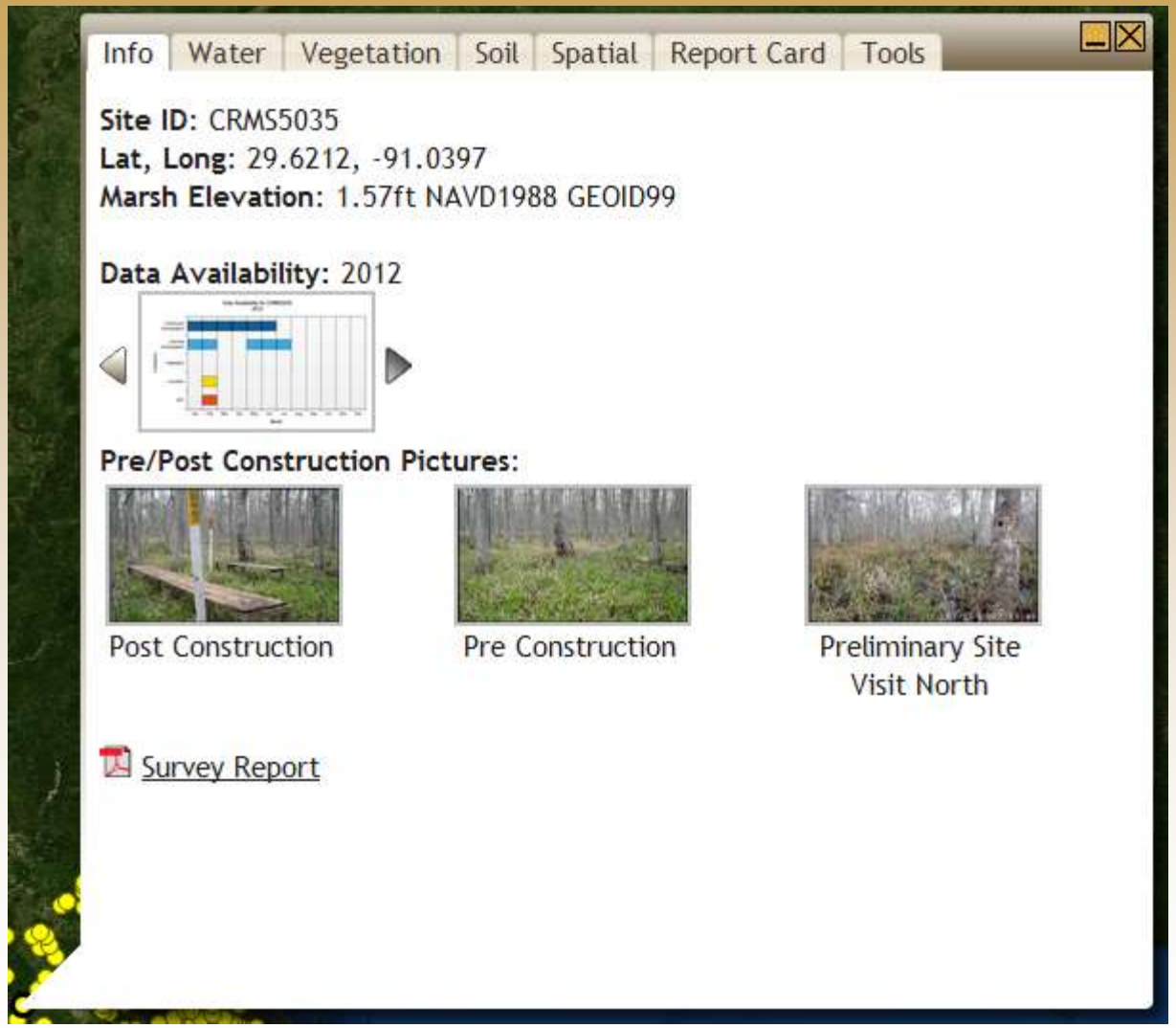
Classify invokes the tools menu with the classification option selected.

CRMS Active Layer

Click a point for Information Bubble

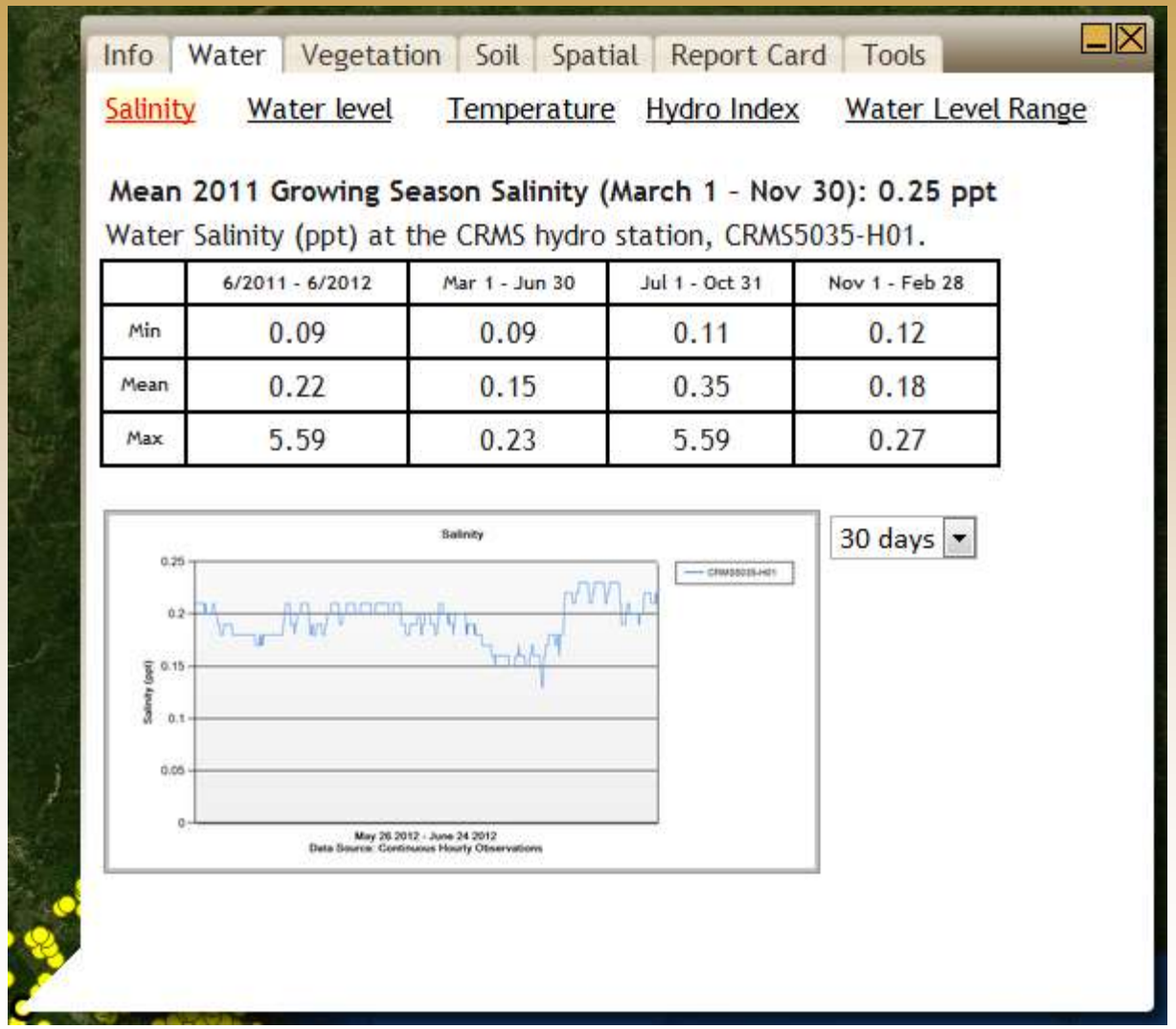


Information Bubble



The information bubble appears when a CRMS site is clicked. The Site Info tab is automatically chosen when the bubble pops up on the screen.

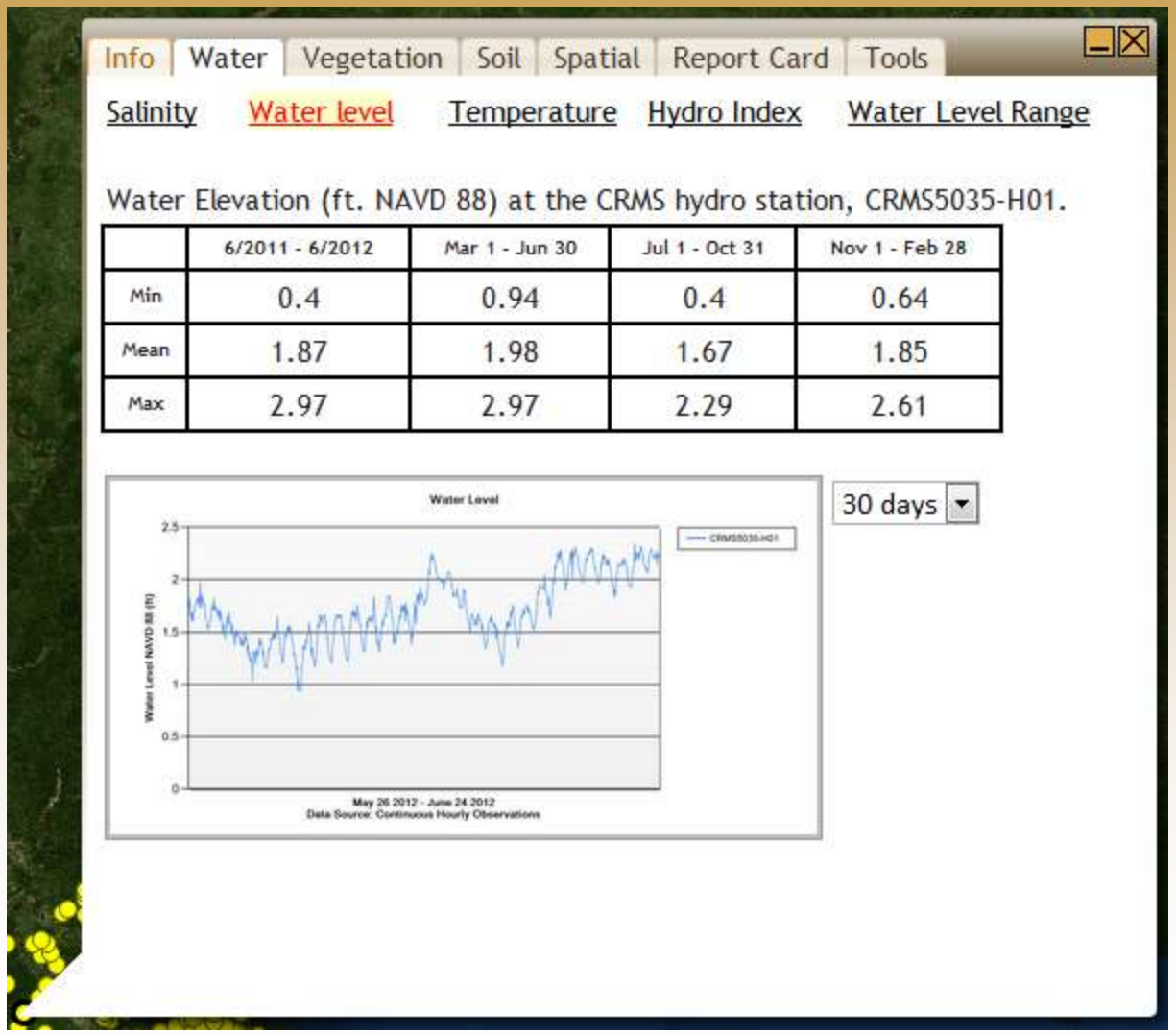
Information Bubble



The Water tab contains all hydrologic information for the selected site.

Salinity – Brief overview of salinity data for the site. Also charts most recent salinity data for the site.

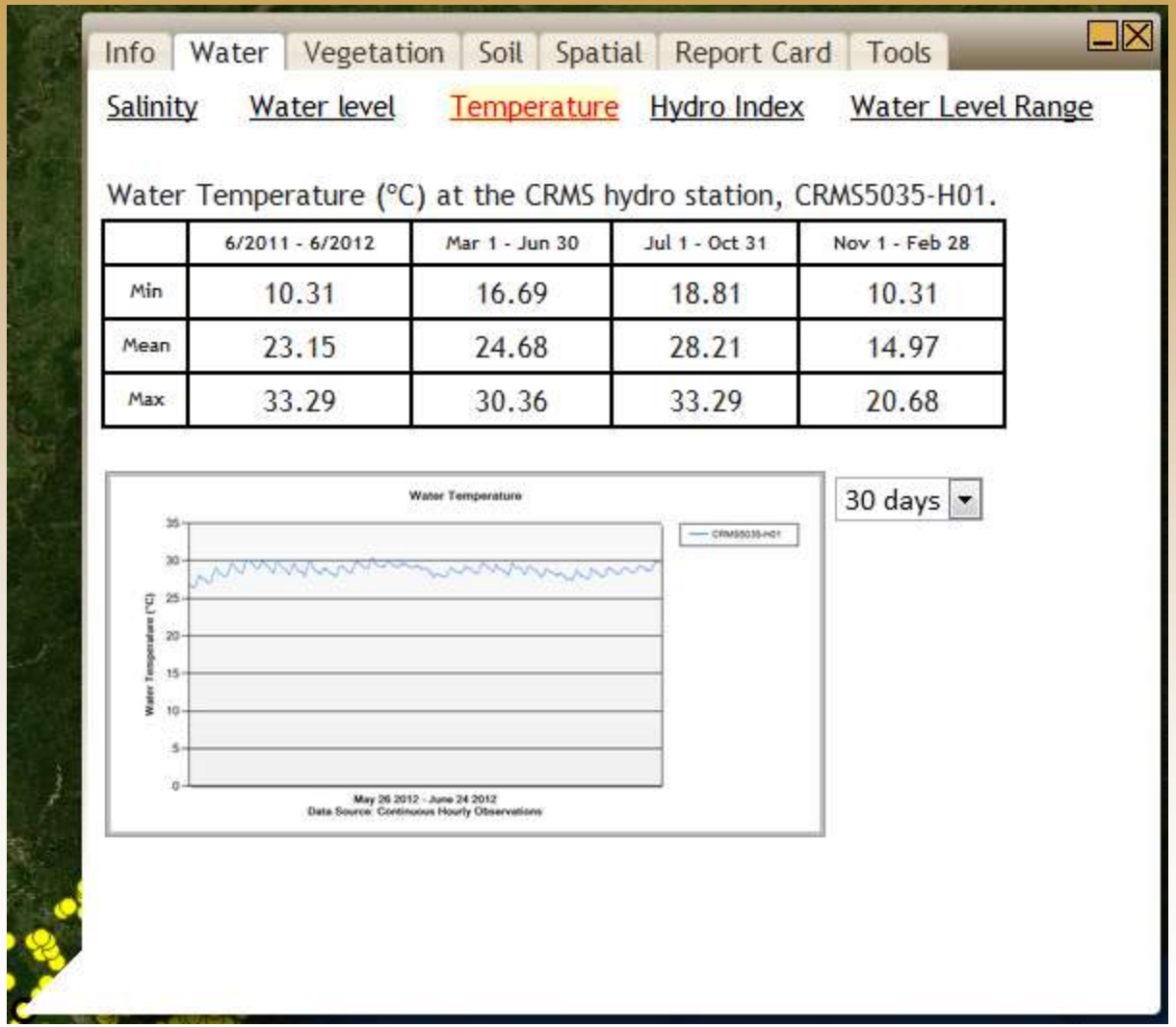
Information Bubble



The Water tab contains all hydrologic information for the selected site.

Water Level – Brief overview of water level data for the site. Also charts most recent water level data for the site.

Information Bubble

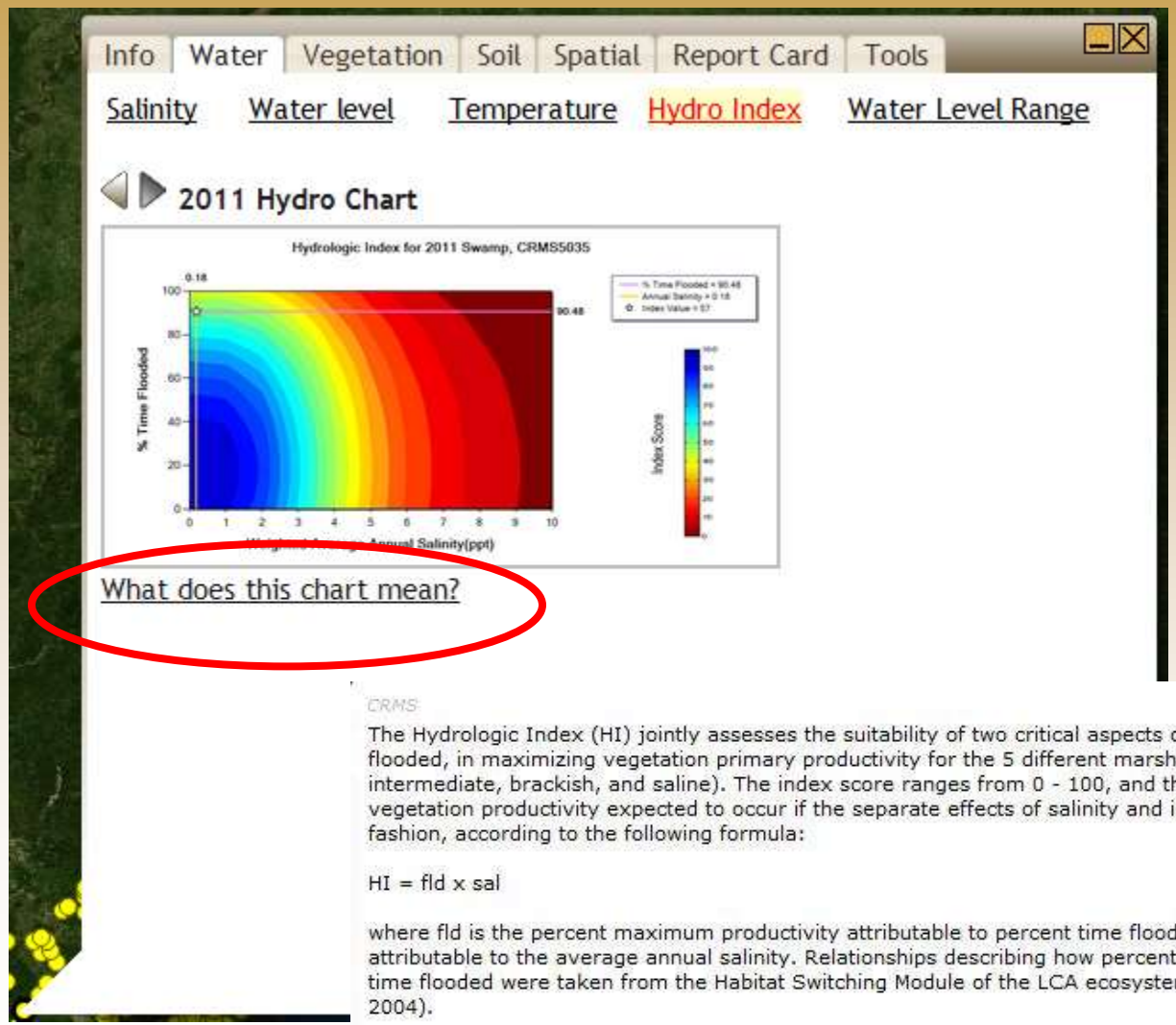


The Water tab contains all hydrologic information for the selected site.

Water Temperature – Brief overview of water temperature data for the site. Also charts most recent temperature data for the site.

CRMS Active Layer

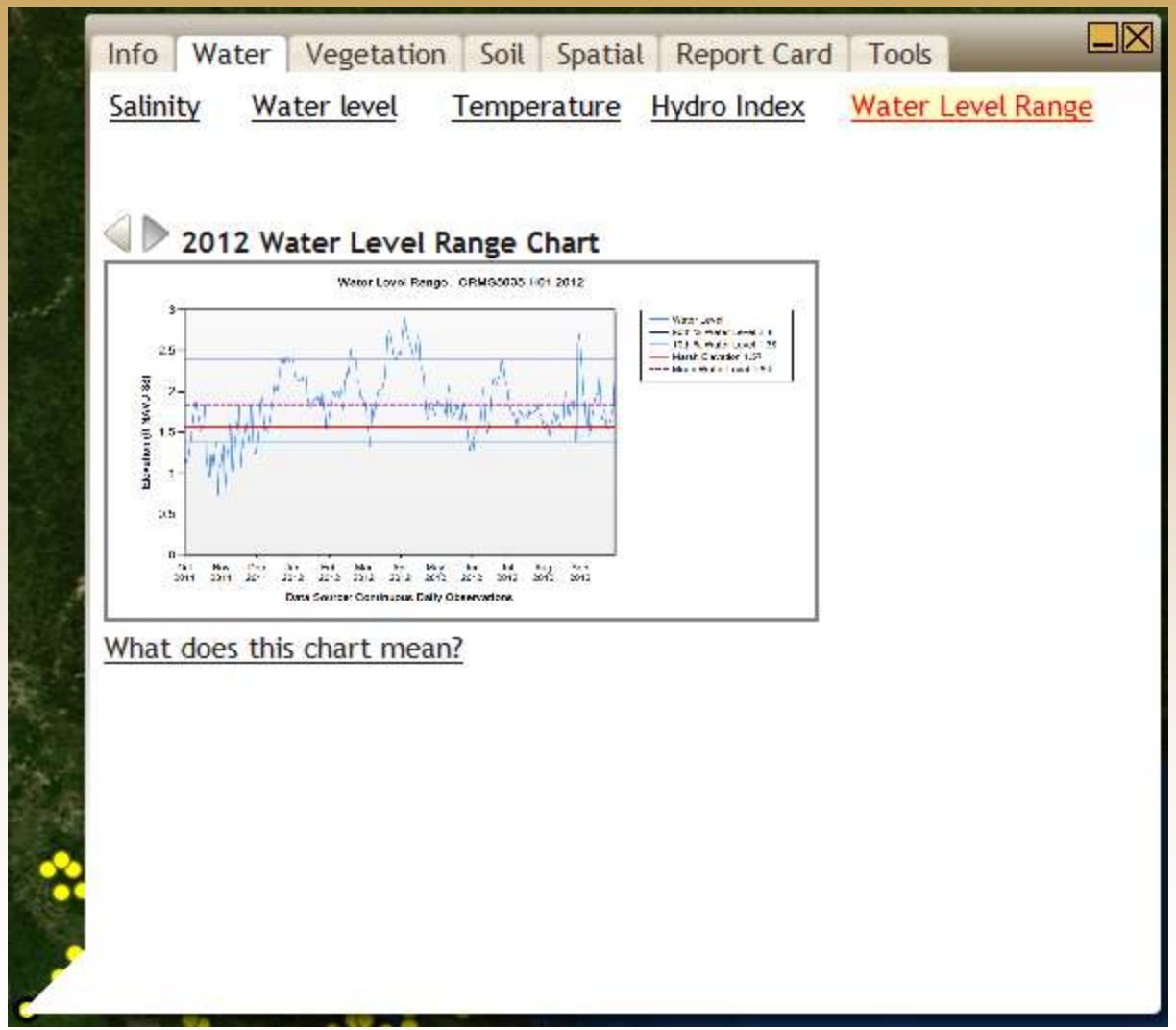
Information Bubble



The Water tab contains all hydrologic information for the selected site.

Hydro Index – All Hydro Index charts available for the site.

Information Bubble



The Water tab contains all hydrologic information for the selected site.

Water Level Range – All water level range charts available for the current site.

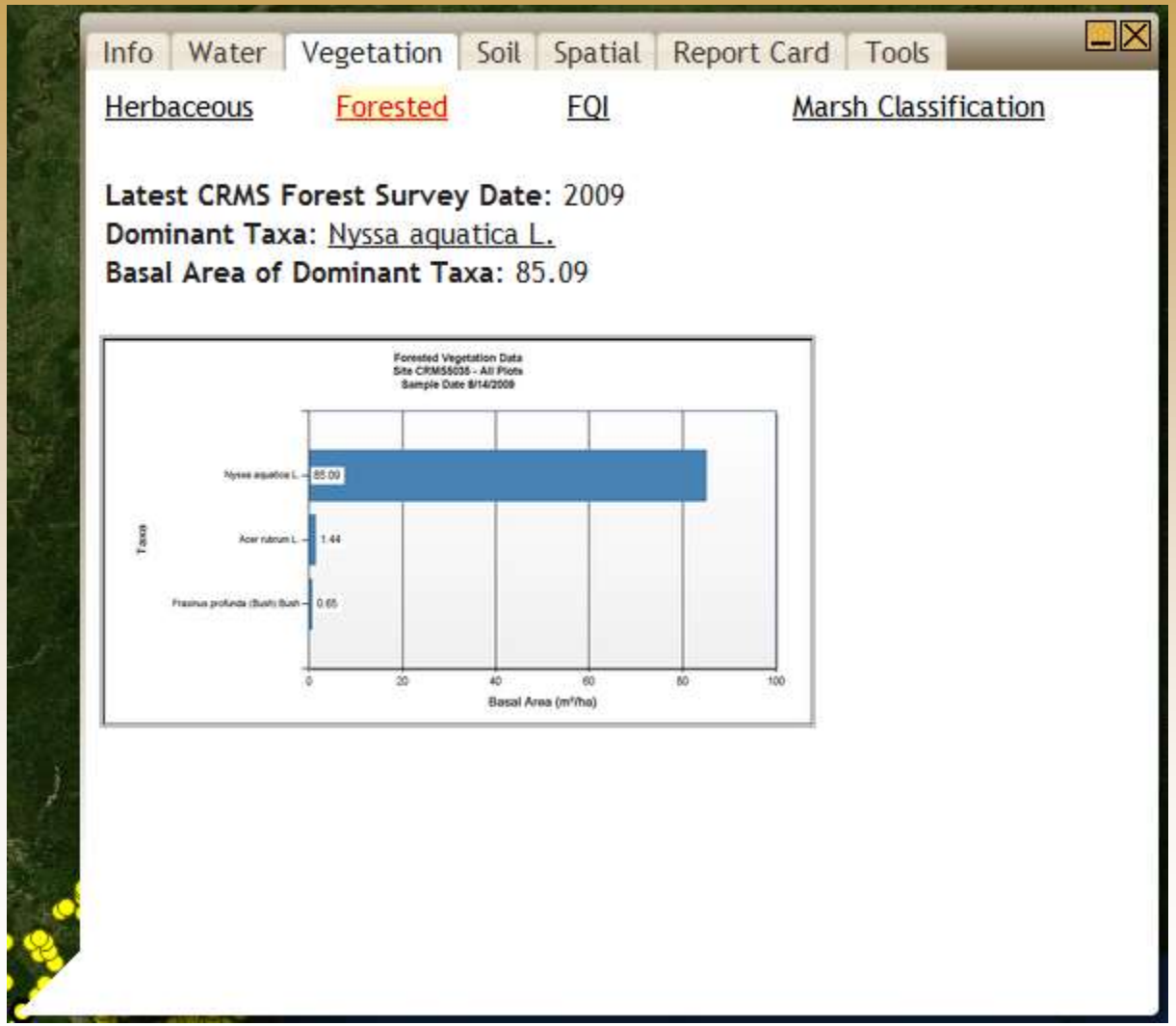
CRMS Active Layer

Information Bubble

The Vegetation tab contains all vegetation information for the selected site.

Herbaceous – Species driven percent cover chart.

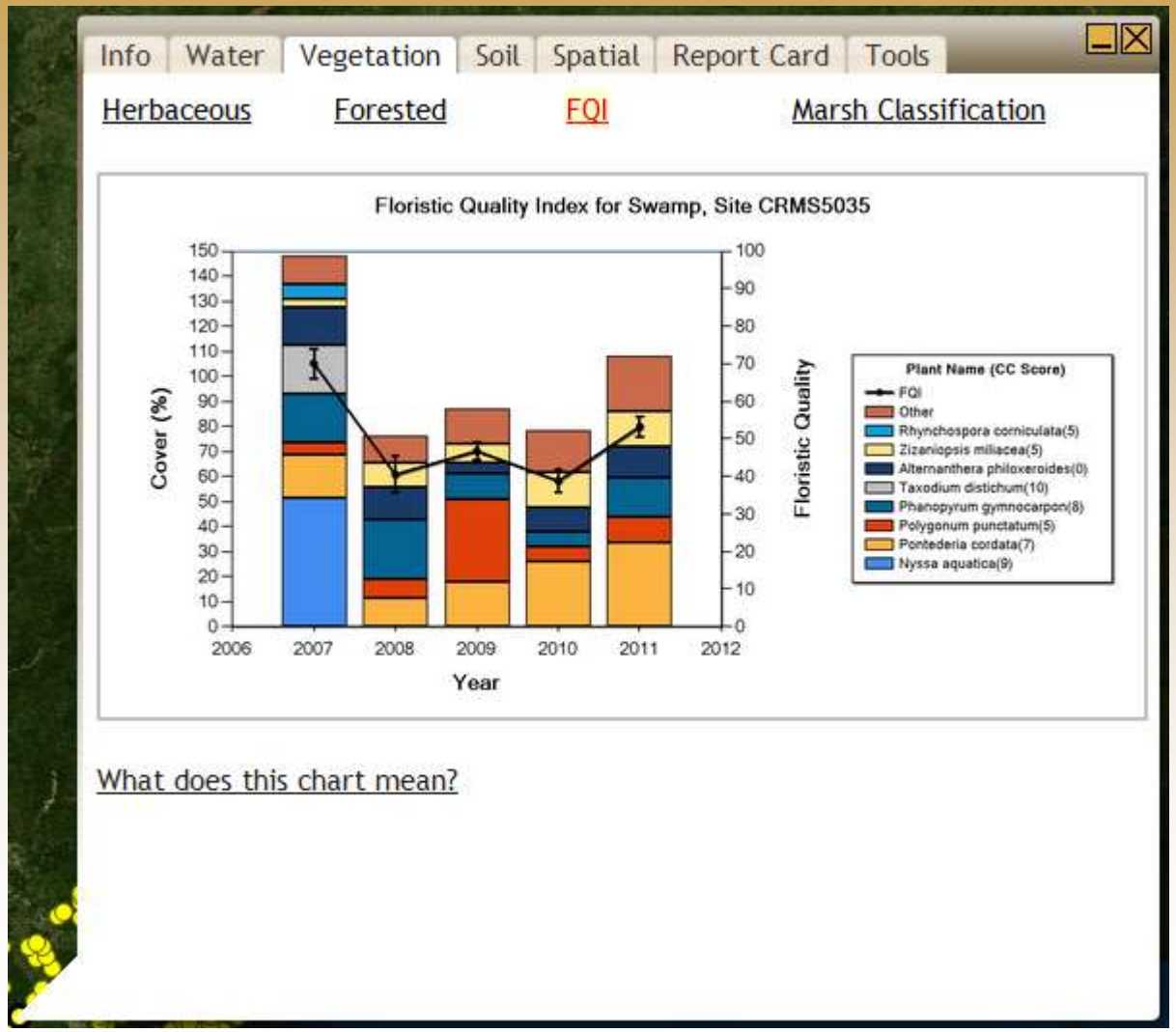
Information Bubble



The Vegetation tab contains all vegetation information for the selected site.

Forested – Species driven basal area chart.

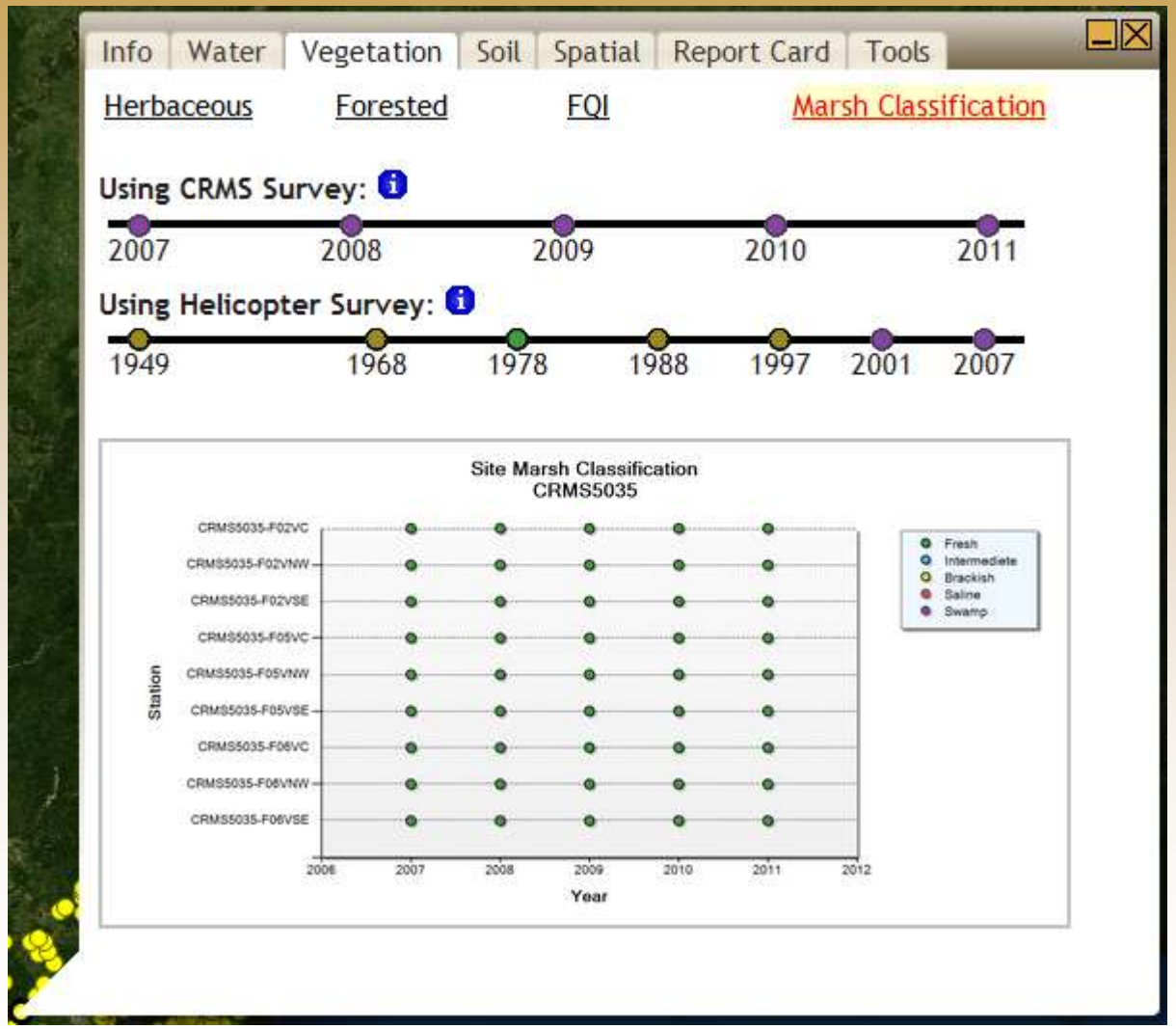
Information Bubble



The Vegetation tab contains all vegetation information for the selected site.

Floristic Quality Index

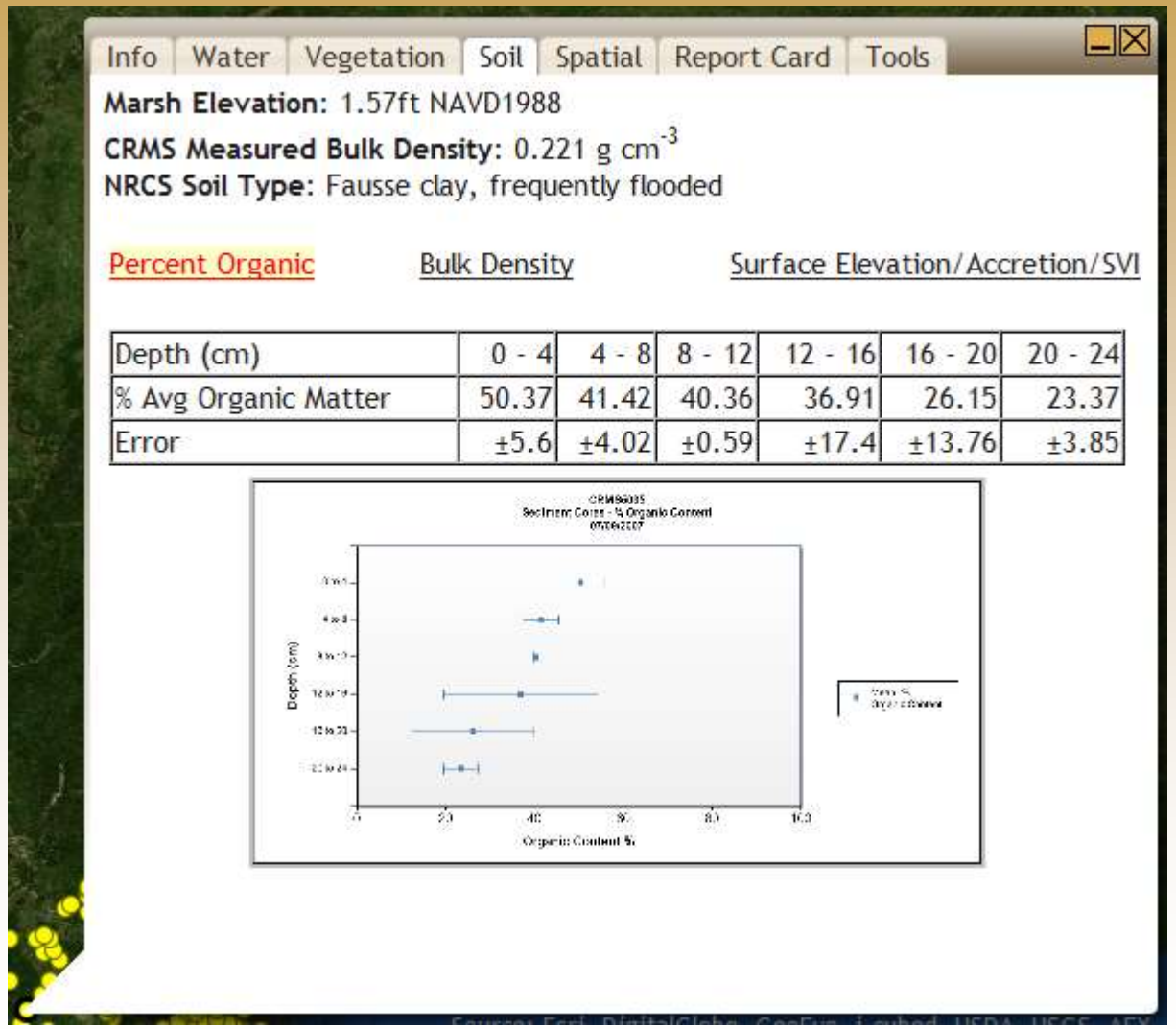
Information Bubble



The Vegetation tab contains all vegetation information for the selected site.

Marsh Classification – The chart displays marsh class by station over time, the top bar is marsh class at the site level, and the bottom line is marsh class at the site level using the helicopter survey data.

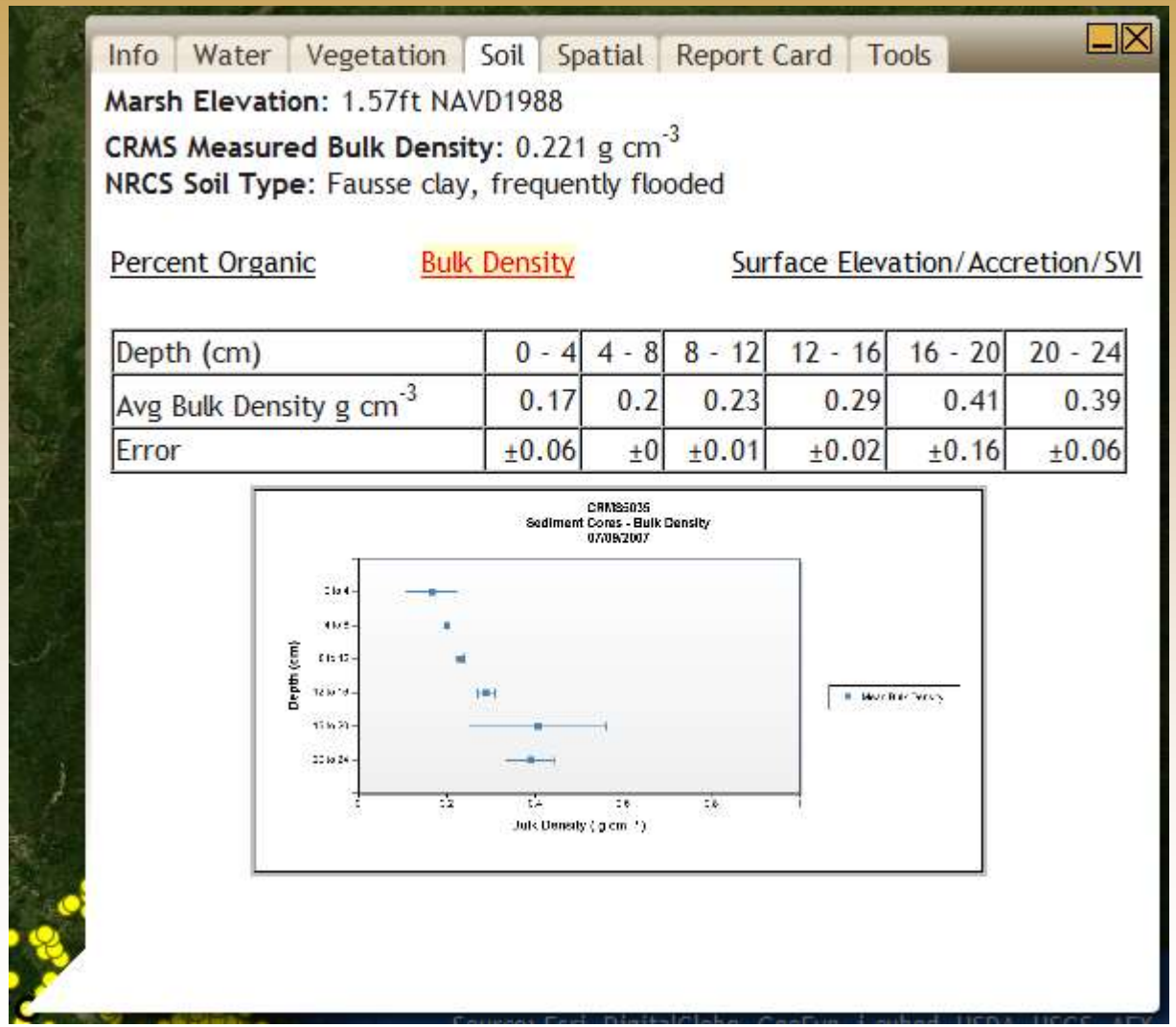
Information Bubble



The Soil tab contains all soil information for the selected site.

Percent Organic – Soil profiles taken at site establishment.

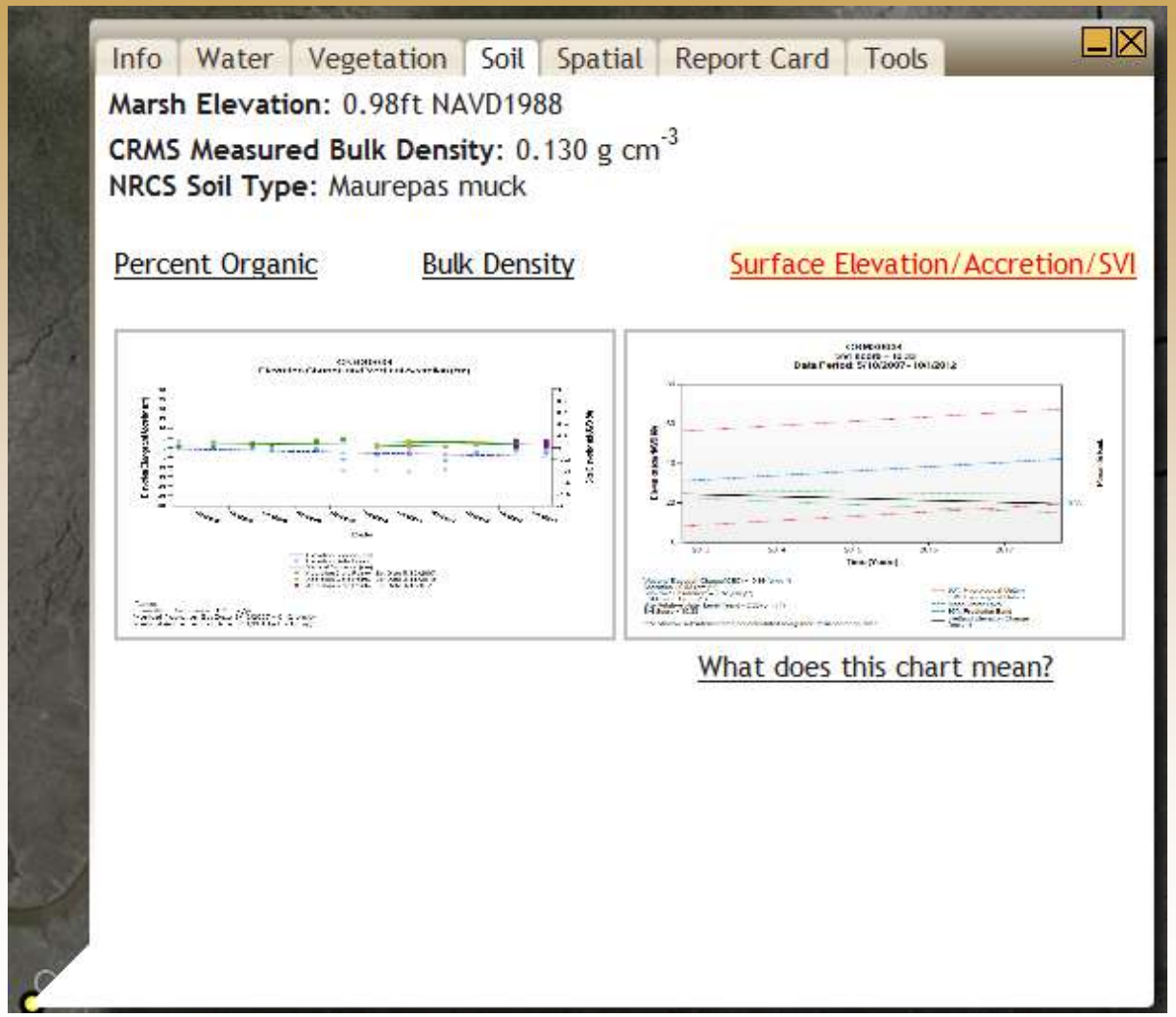
Information Bubble



The Soil tab contains all soil information for the selected site.

Bulk Density - Soil profiles taken at site establishment.

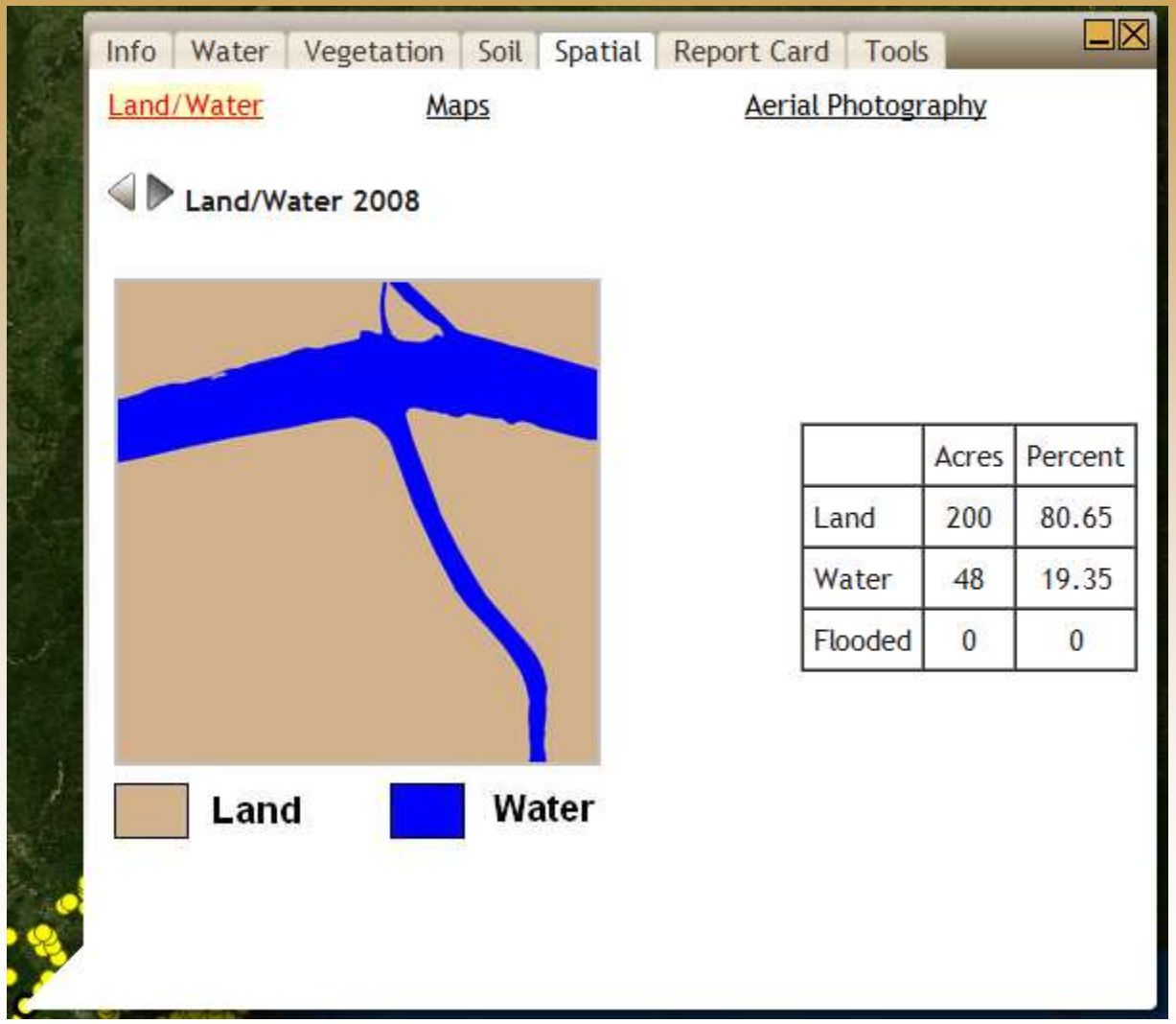
Information Bubble



The Soil tab contains all soil information for the selected site.

Surface Elevation/Accretion – currently displays site level elevation change and accretion and gives rates for shallow subsidence.

Information Bubble

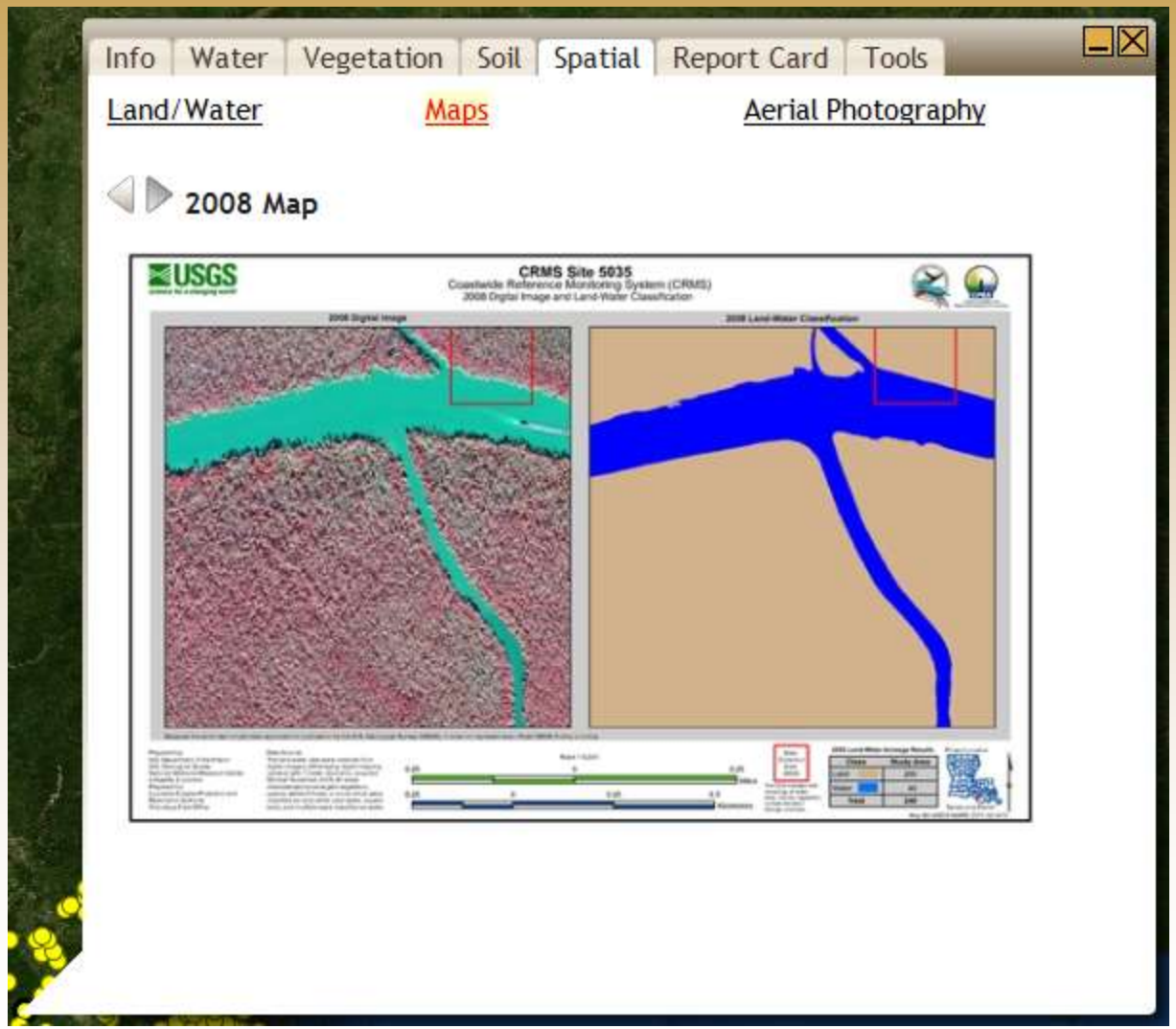


	Acres	Percent
Land	200	80.65
Water	48	19.35
Flooded	0	0

The Spatial tab contains all spatial information for the selected site.

Land/Water with acre breakdowns

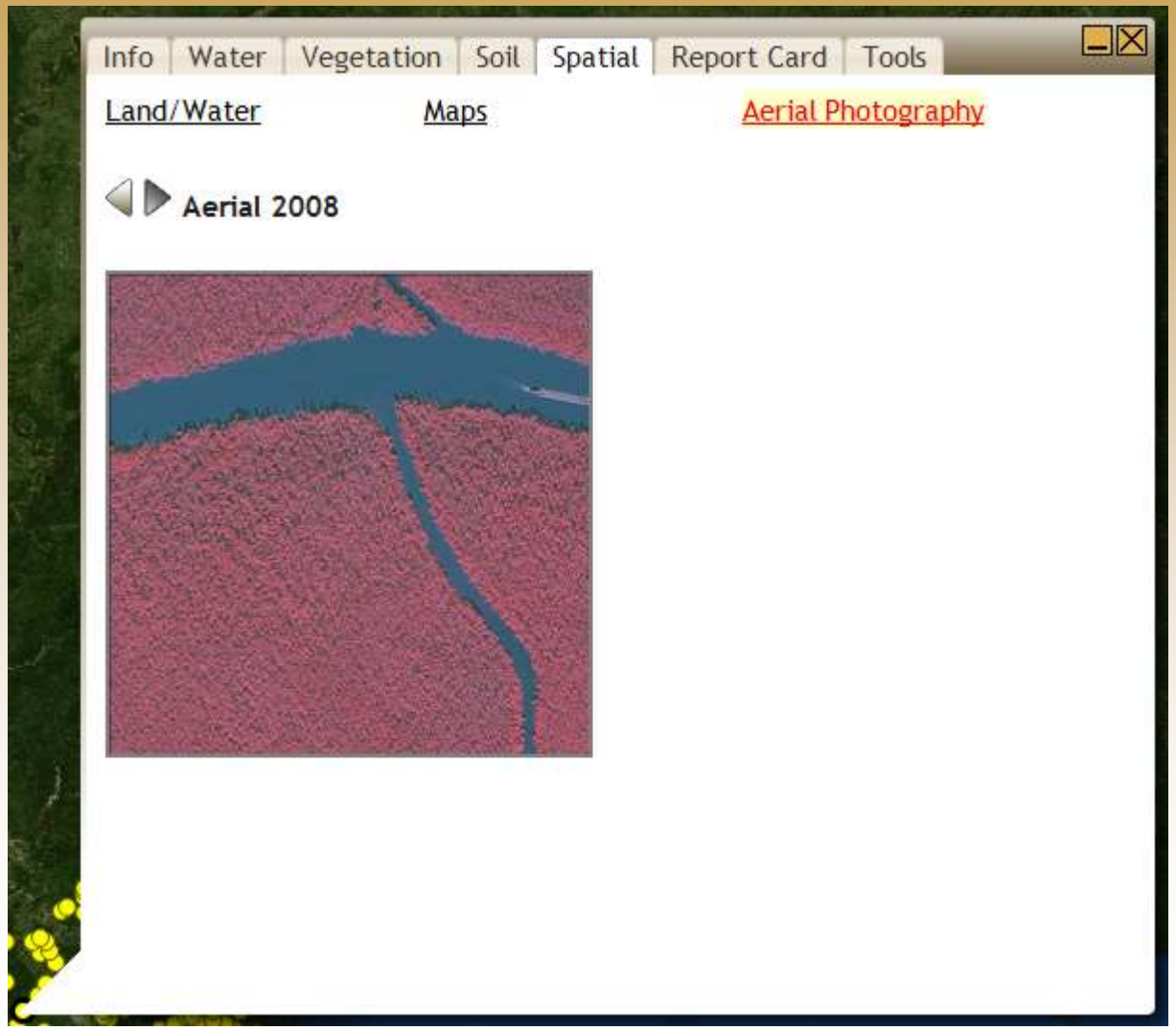
Information Bubble



The Spatial tab contains all spatial information for the selected site.

Site Specific maps at the 1km^2 scale.

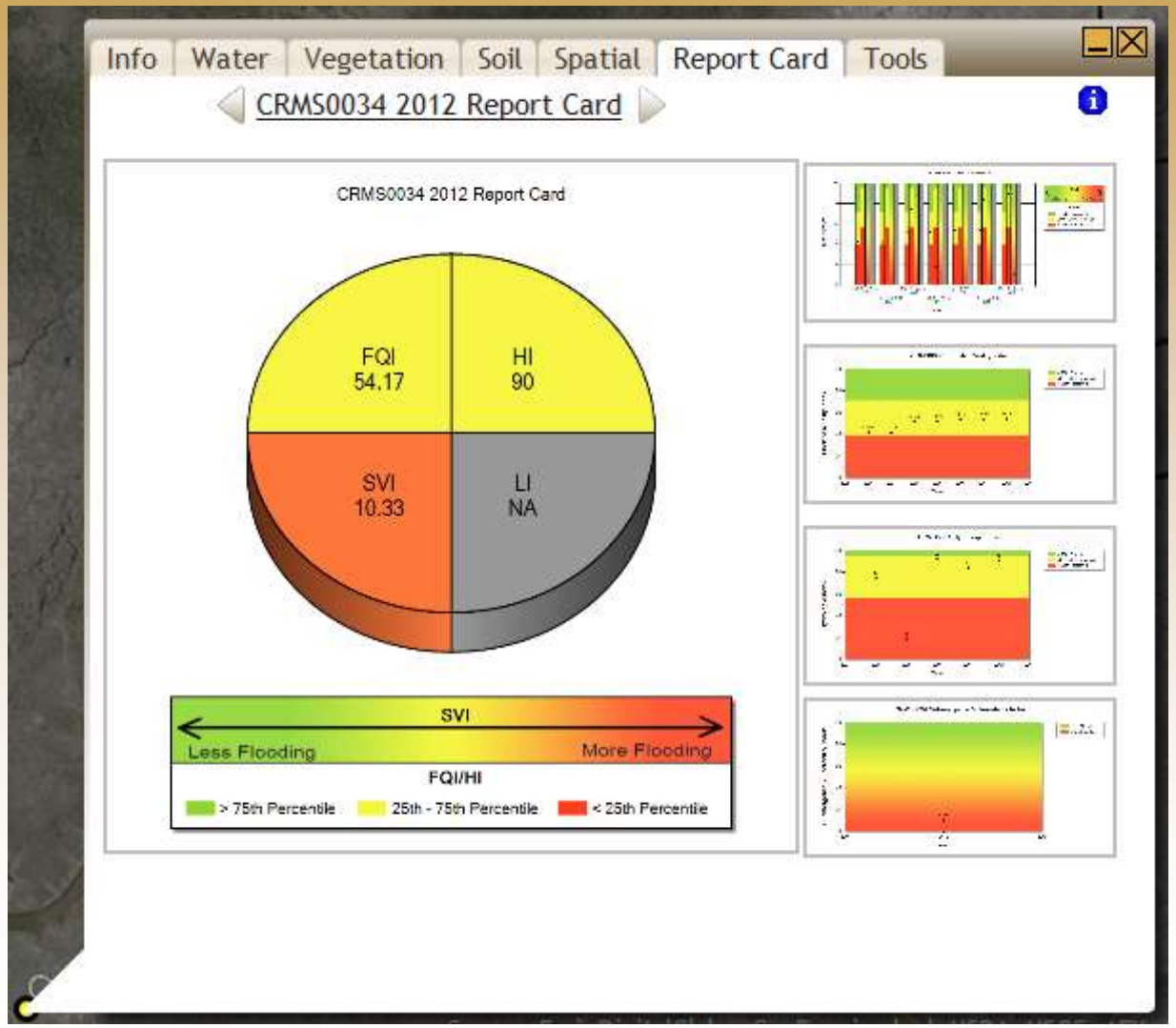
Information Bubble



The Spatial tab contains all spatial information for the selected site.

Aerial Photography

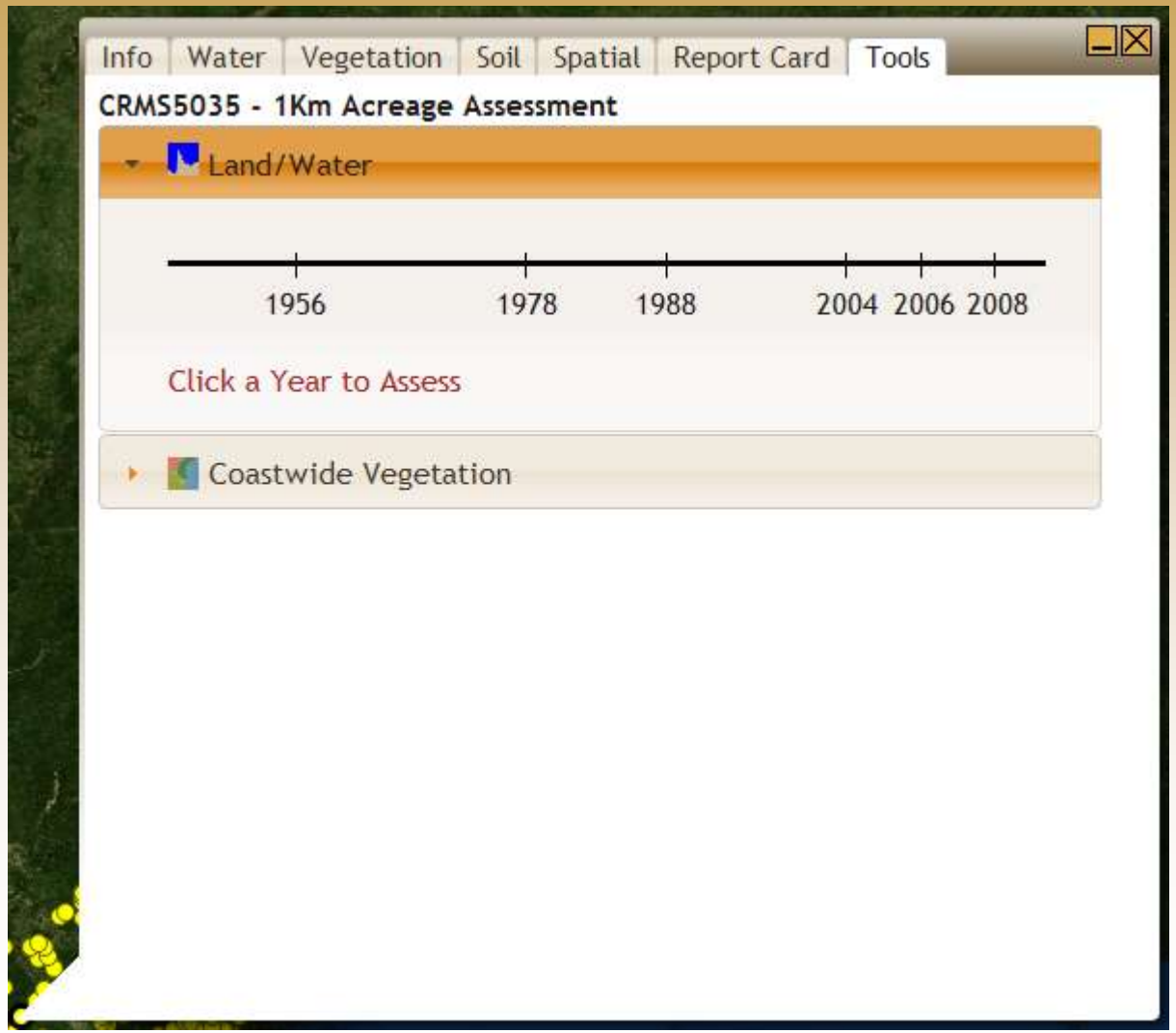
Information Bubble



The Report Card tab contains all report card information for the selected site.

Report Card

Information Bubble

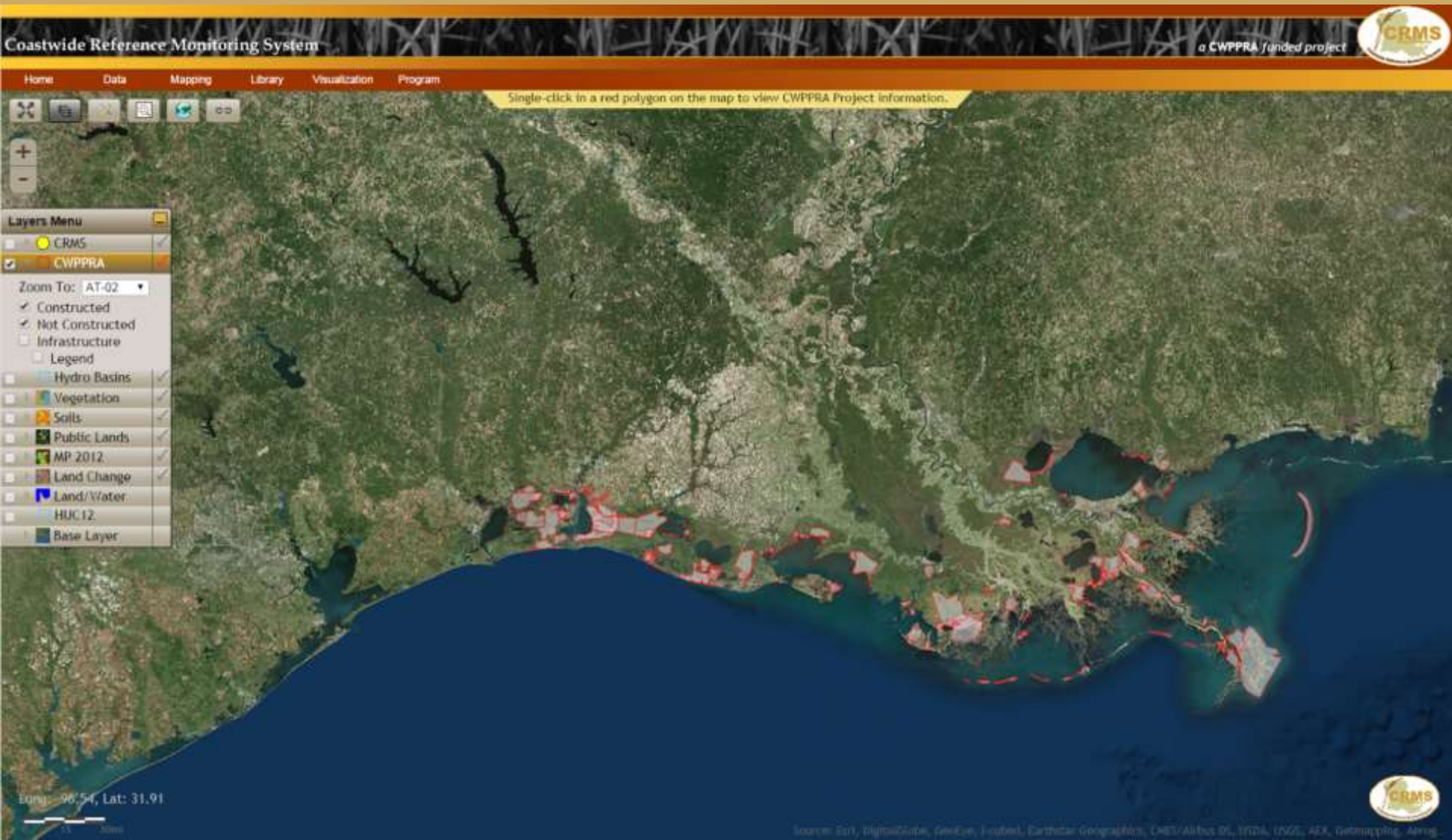


The Tools tab lets you do an Acreage Assessment on the selected site.

Acreage Assessment – Use the acreage assessment tool to determine acreage breakdowns of the available coastwide vegetation surveys or land/water data.

CWPPRA Active Layer

CWPPRA Active Layer



CWPPRA Active Layer

Zoom to function zooms to the project and shows the information bubble for it.

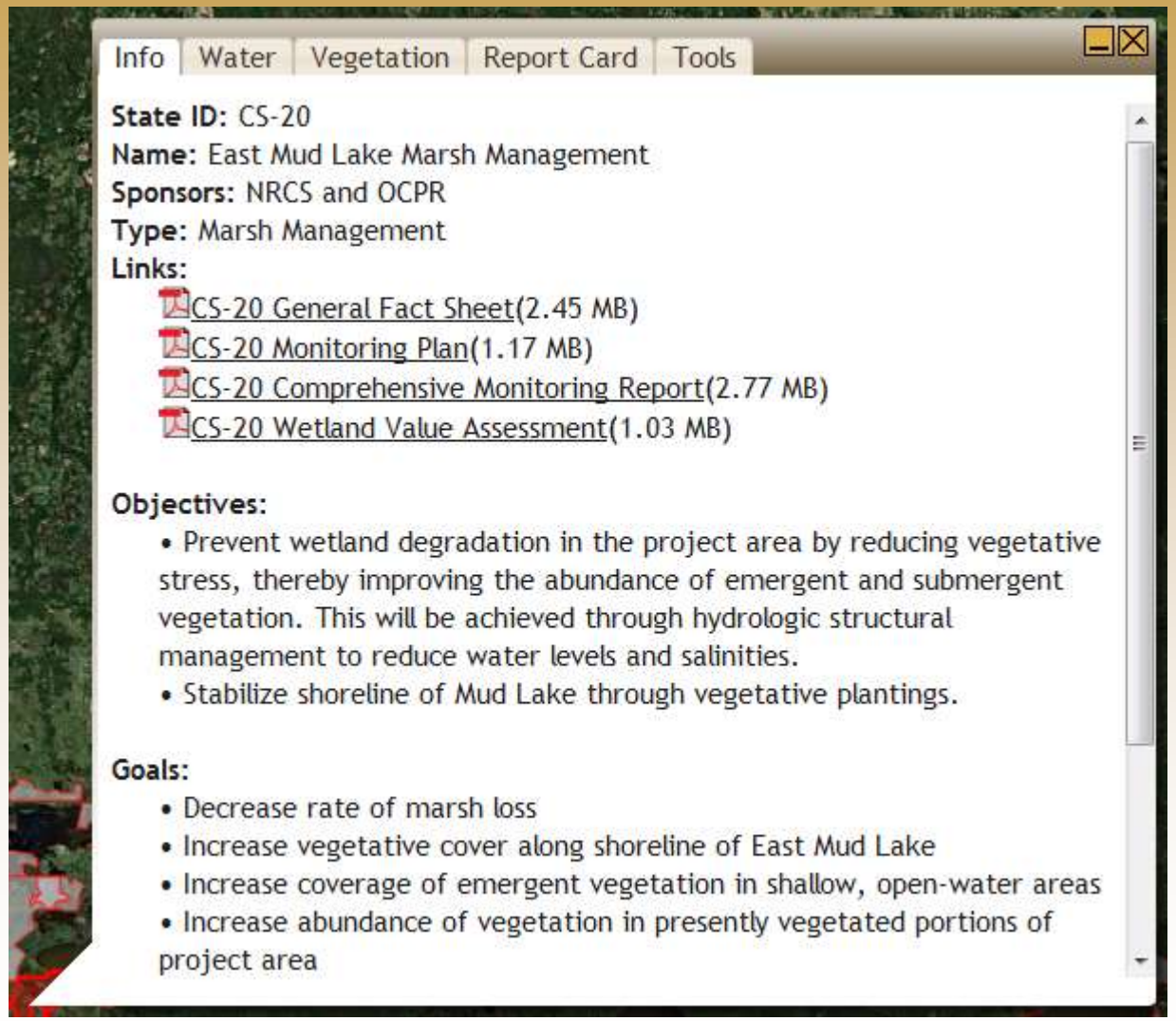
Checkbox adds/removes the Constructed projects layer to the map.

Checkbox adds/removes the Not Constructed projects layer to the map.

Checkbox adds/removes the Project Infrastructure layer to the map and shows the legend.

CWPPRA Active Layer

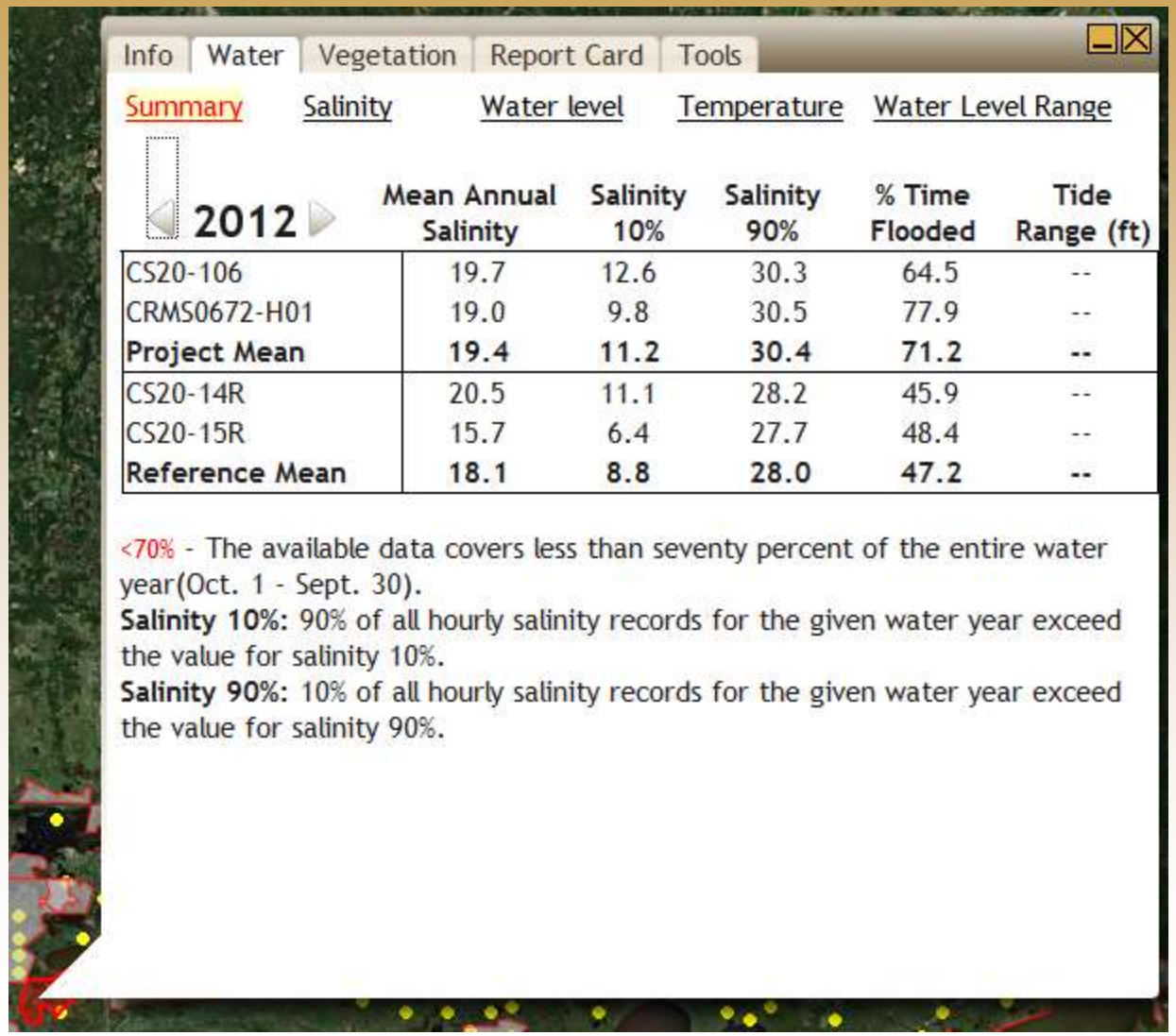
Information Bubble



The information bubble appears when a CWPPRA project is clicked. The Project Info tab is automatically chosen when the bubble pops up on the screen.

CWPPRA Active Layer

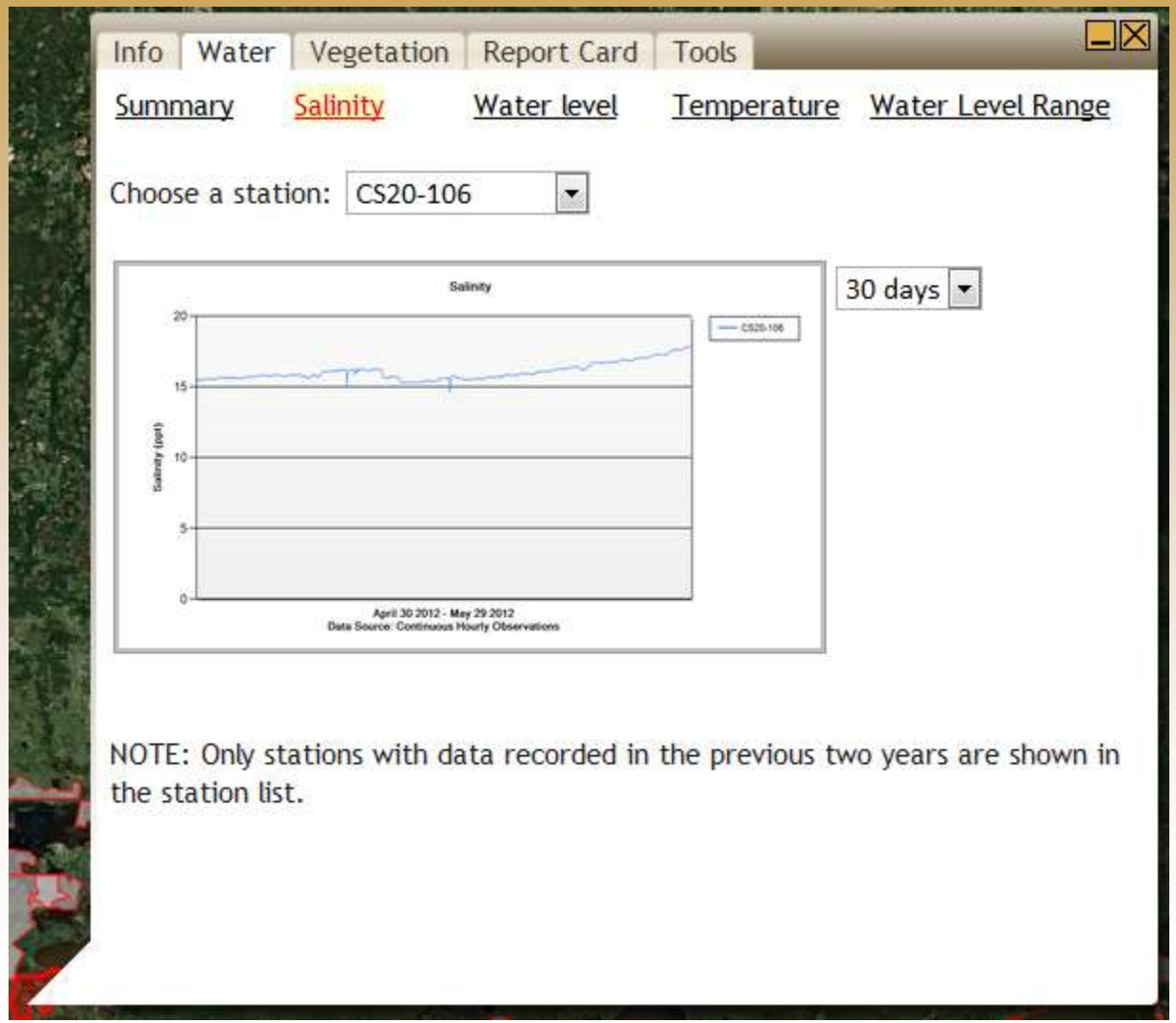
Information Bubble



The Water tab contains all hydrologic information for the selected project.

Summary – Gives a brief overview of the hydro data available for the project.

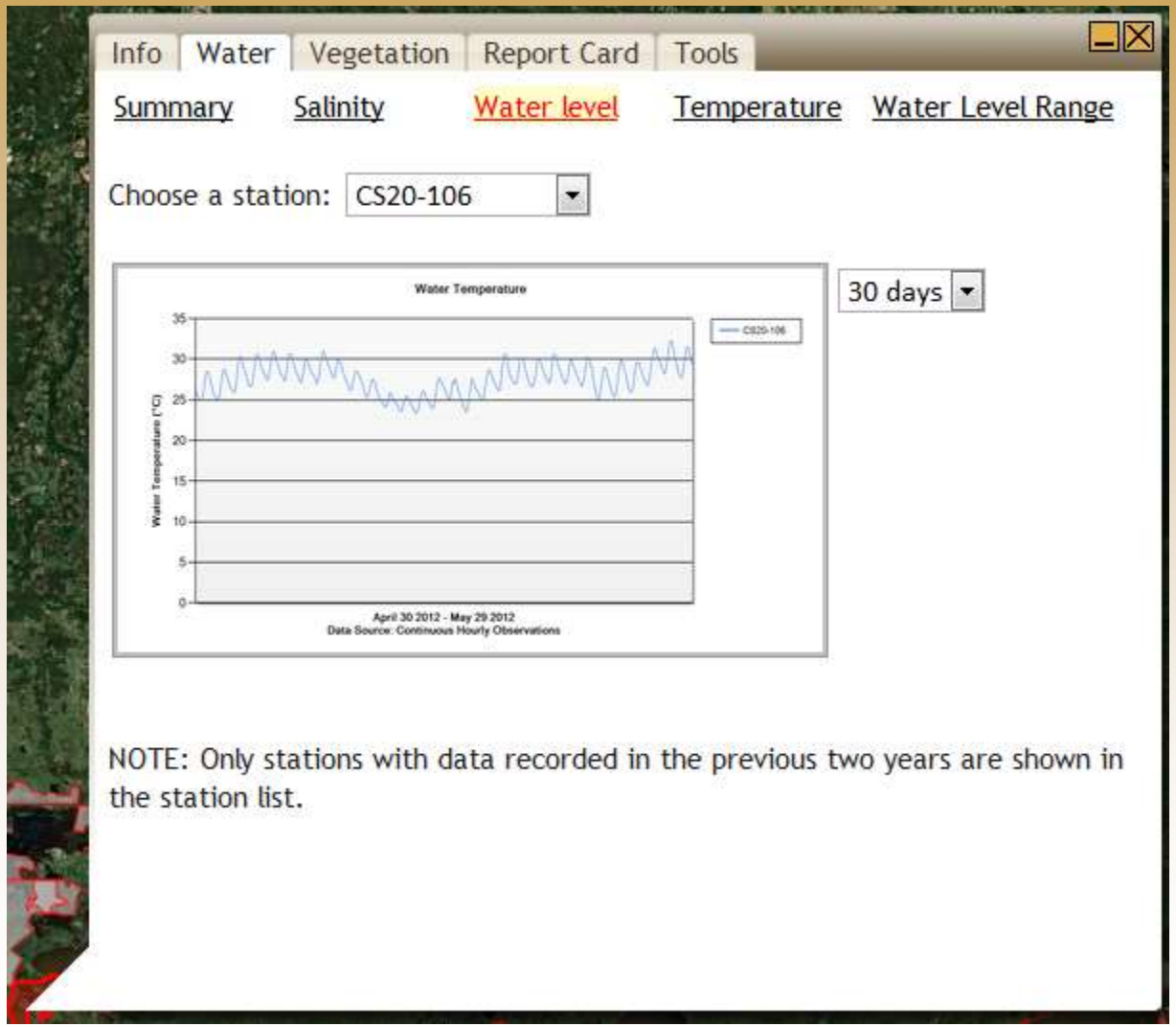
CWPPRA Active Layer Information Bubble



The Water tab contains all hydrologic information for the selected project.

Salinity – Charts most recent data for hydro stations located within the project.

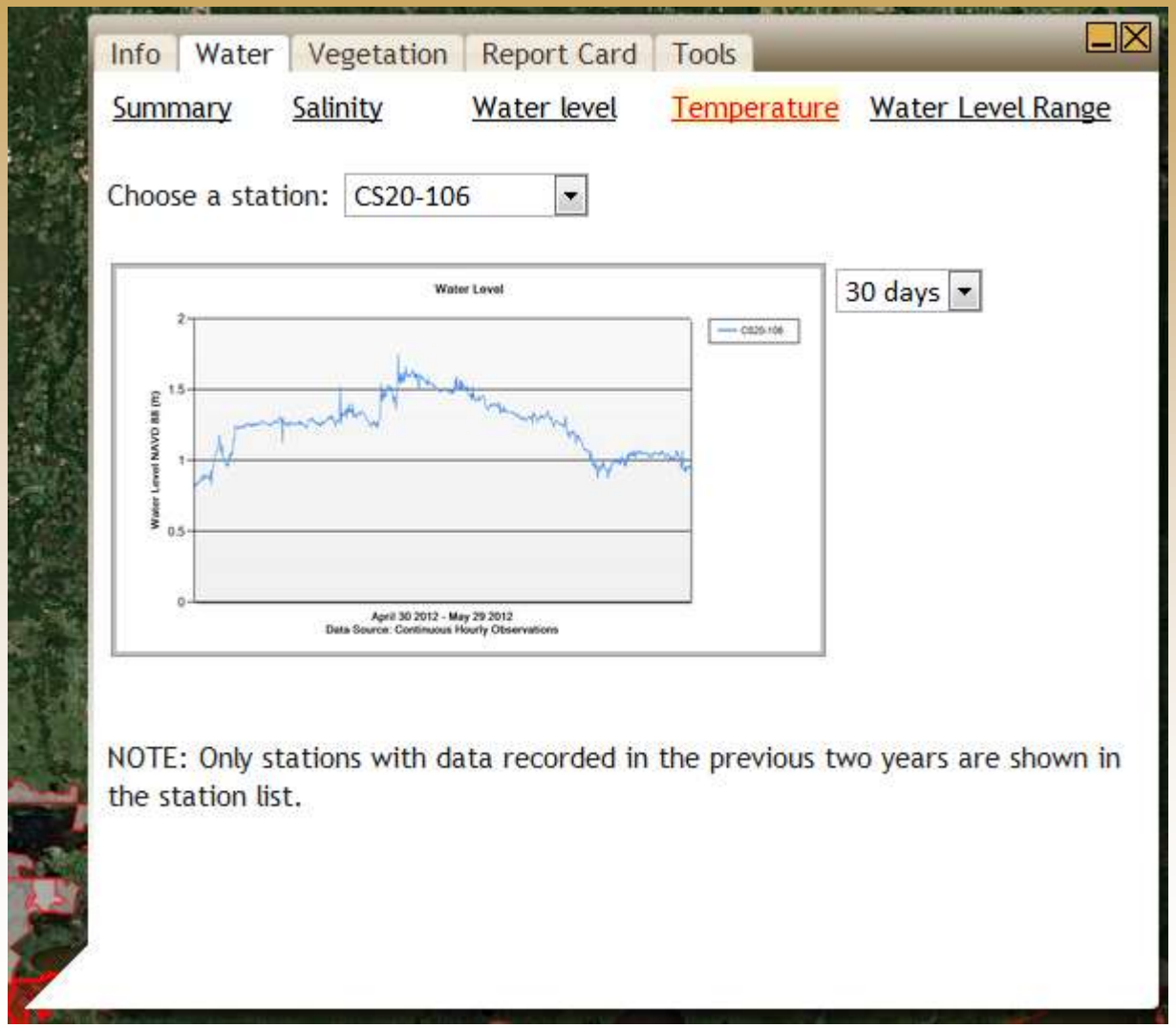
CWPPRA Active Layer Information Bubble



The Water tab contains all hydrologic information for the selected project.

Water Level – Charts most recent data for hydro stations located within the project.

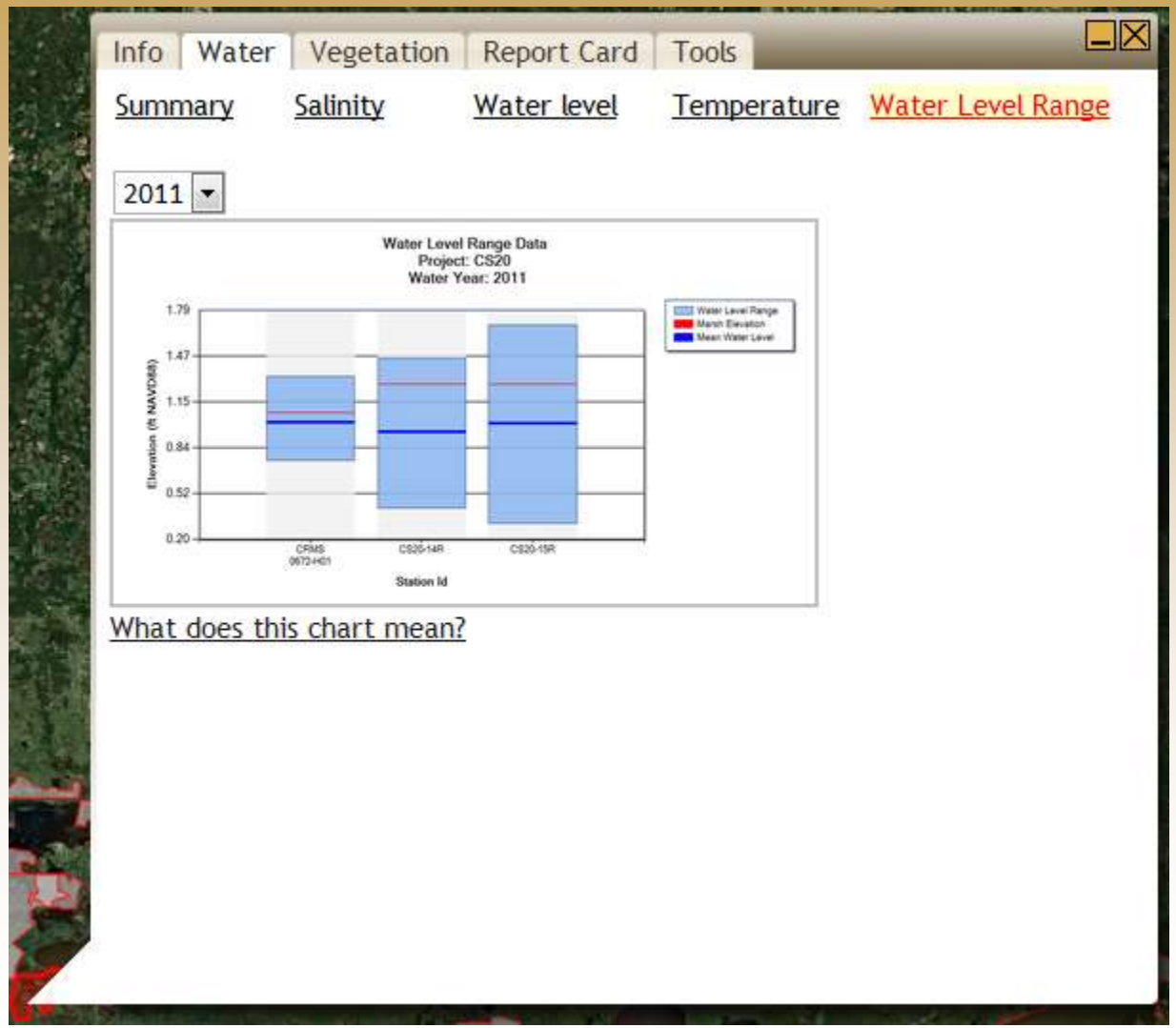
CWPPRA Active Layer Information Bubble



The Water tab contains all hydrologic information for the selected project.

Water Temperature – Charts most recent data for hydro stations located within the project.

CWPPRA Active Layer Information Bubble

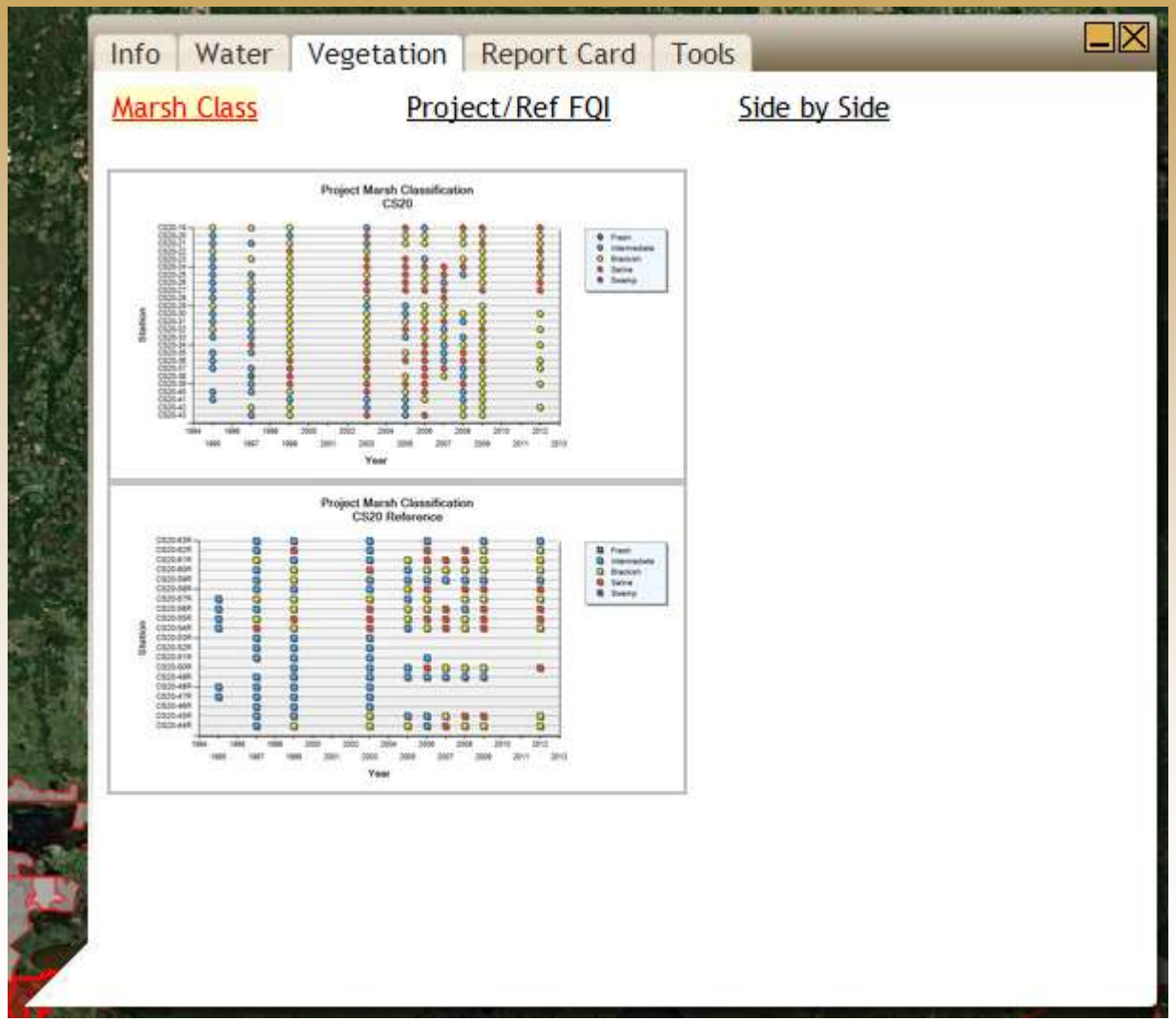


The Water tab contains all hydrologic information for the selected project.

Water Level Range – Charts water level range data for hydro stations located within the project.

CWPPRA Active Layer

Information Bubble



The Vegetation tab contains all vegetation information for the selected project.

Marsh Class – Charts project and project reference Marsh Classification over multiple years.

CWPPRA Active Layer

Information Bubble

The Vegetation tab contains all vegetation information for the selected project.

Project/Ref FQI – Project Scale Floristic Quality Index Chart.

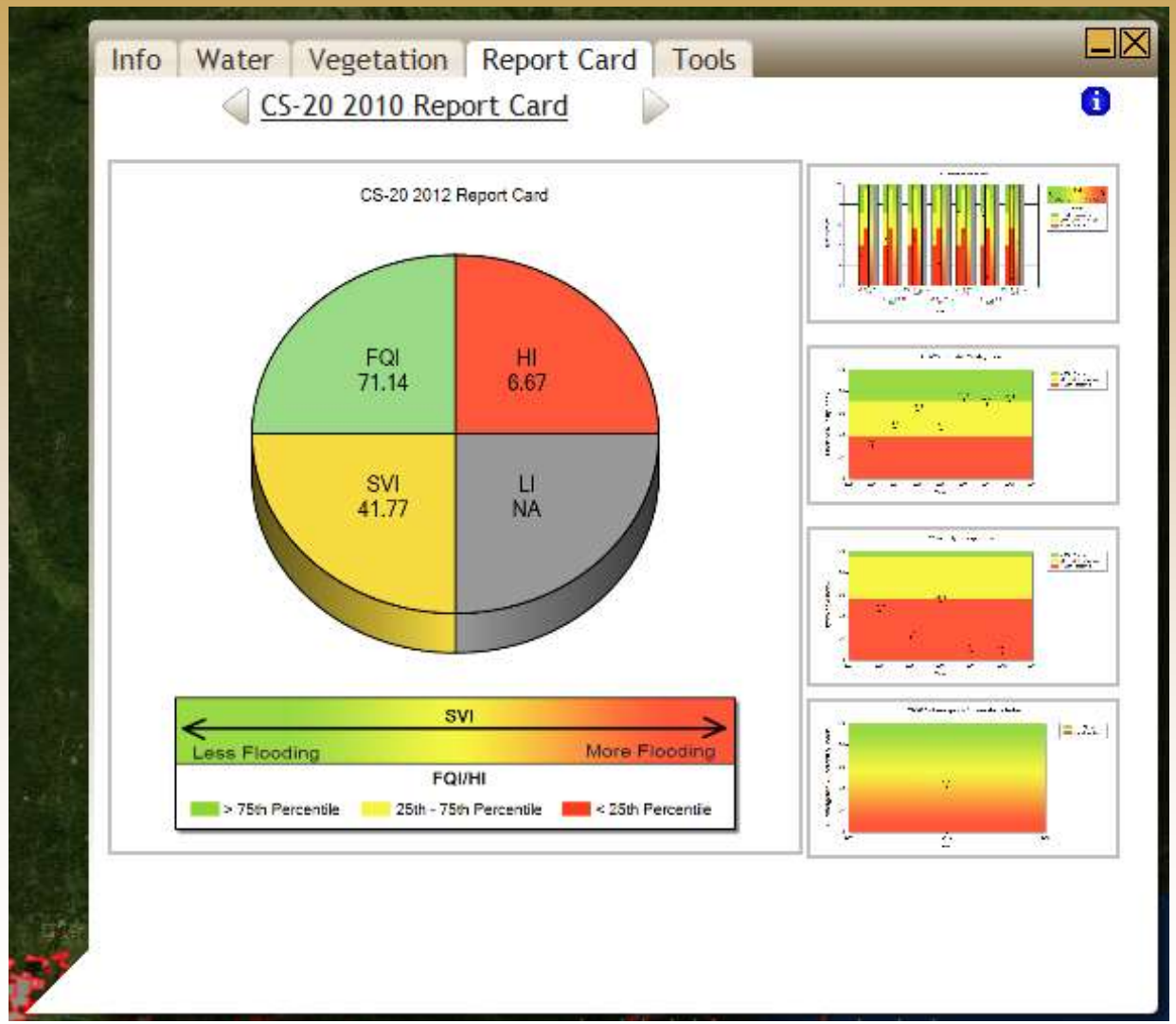
CWPPRA Active Layer

Information Bubble

The Vegetation tab contains all vegetation information for the selected project.

Side by Side – Side by side comparison of Marsh Class using the raster image created from helicopter surveys.

Information Bubble

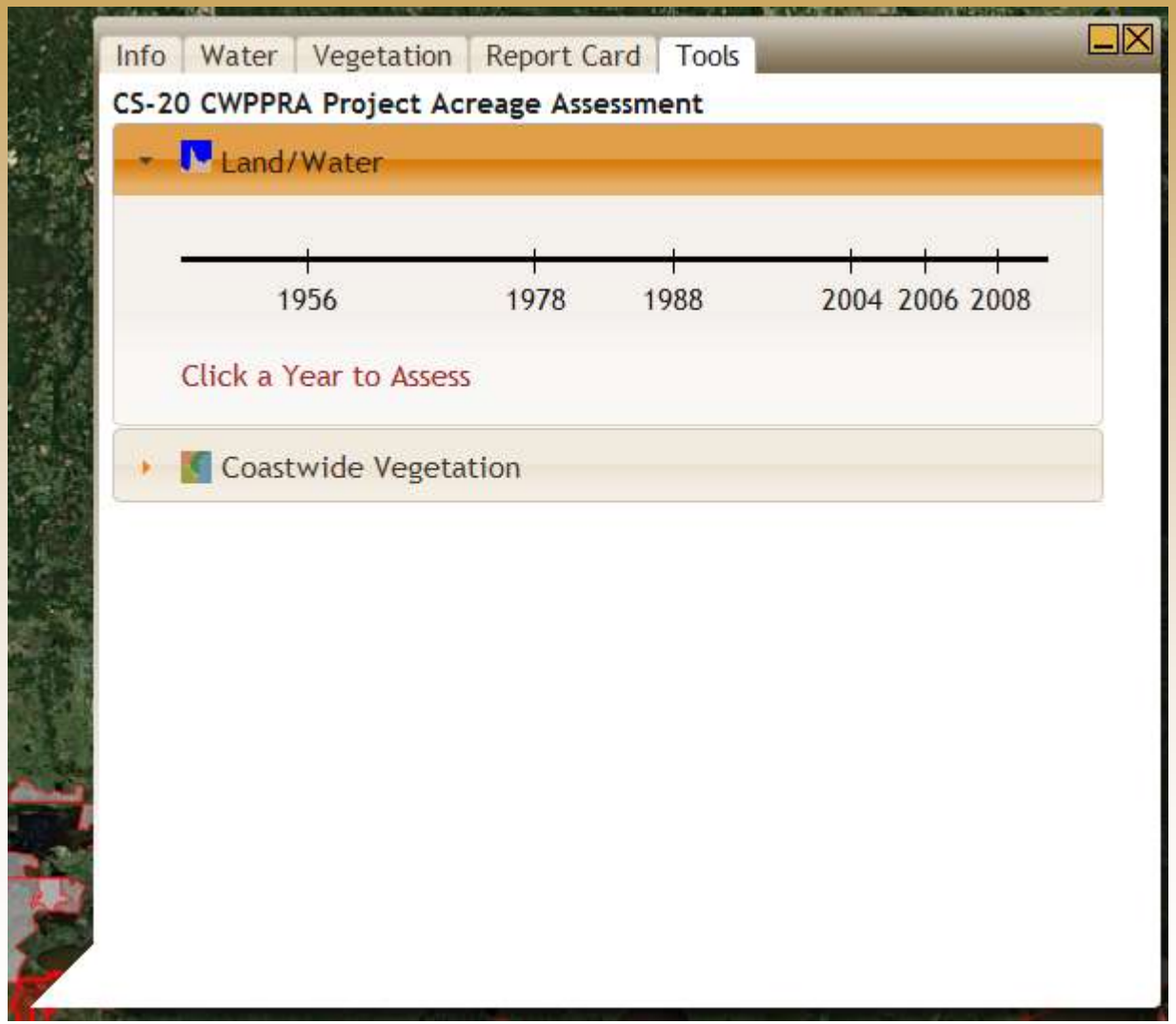


The Report Card tab contains all report card information for the selected project.

Report Card-Summary of project scale information compiled into a report card.

CWPPRA Active Layer

Information Bubble

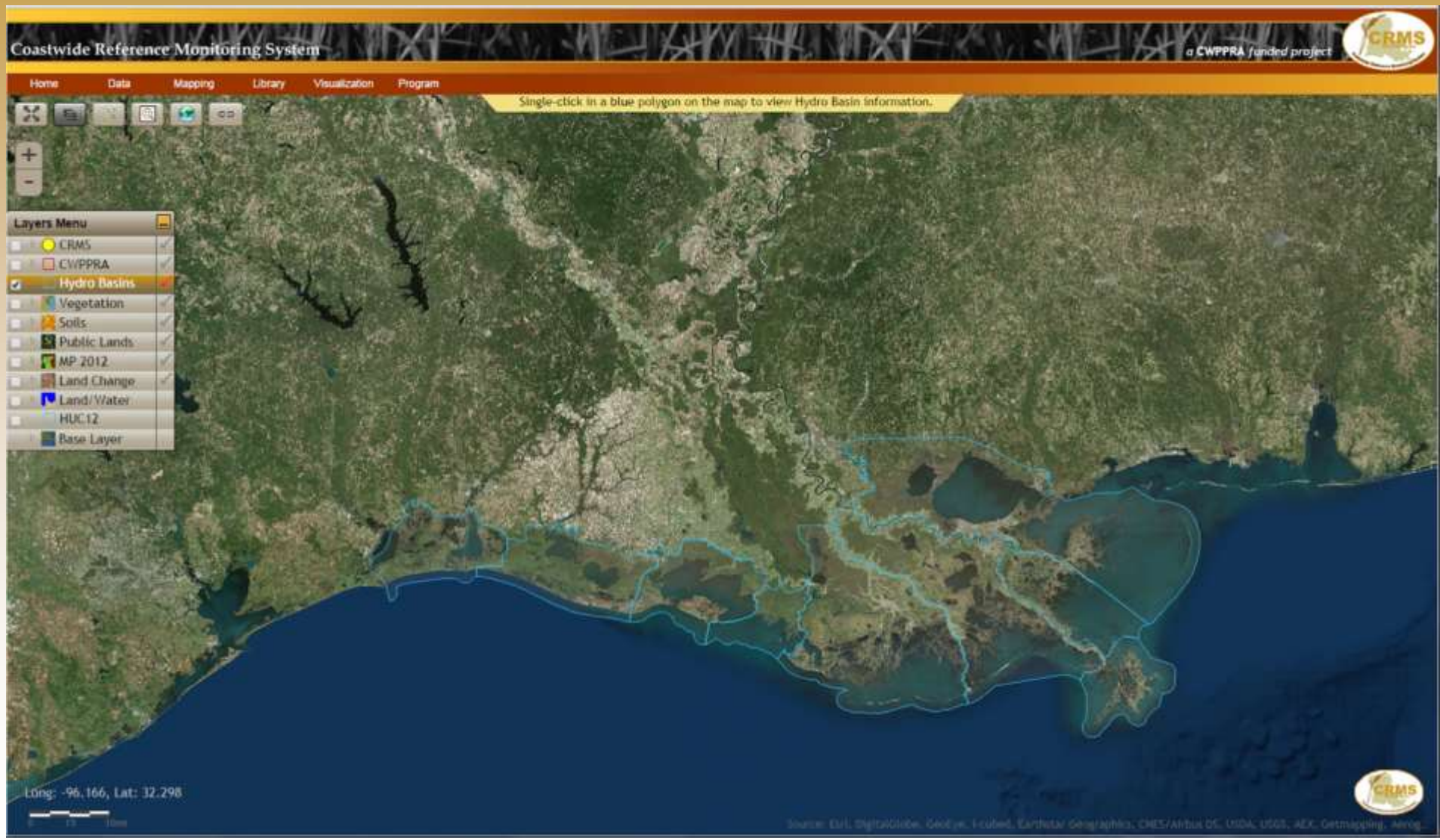


The Tools tab lets you do an Acreage Assessment on the selected project.

Acreage Assessment – Use the acreage assessment tool to determine acreage breakdowns of the available coastwide vegetation surveys or Land/Water data.

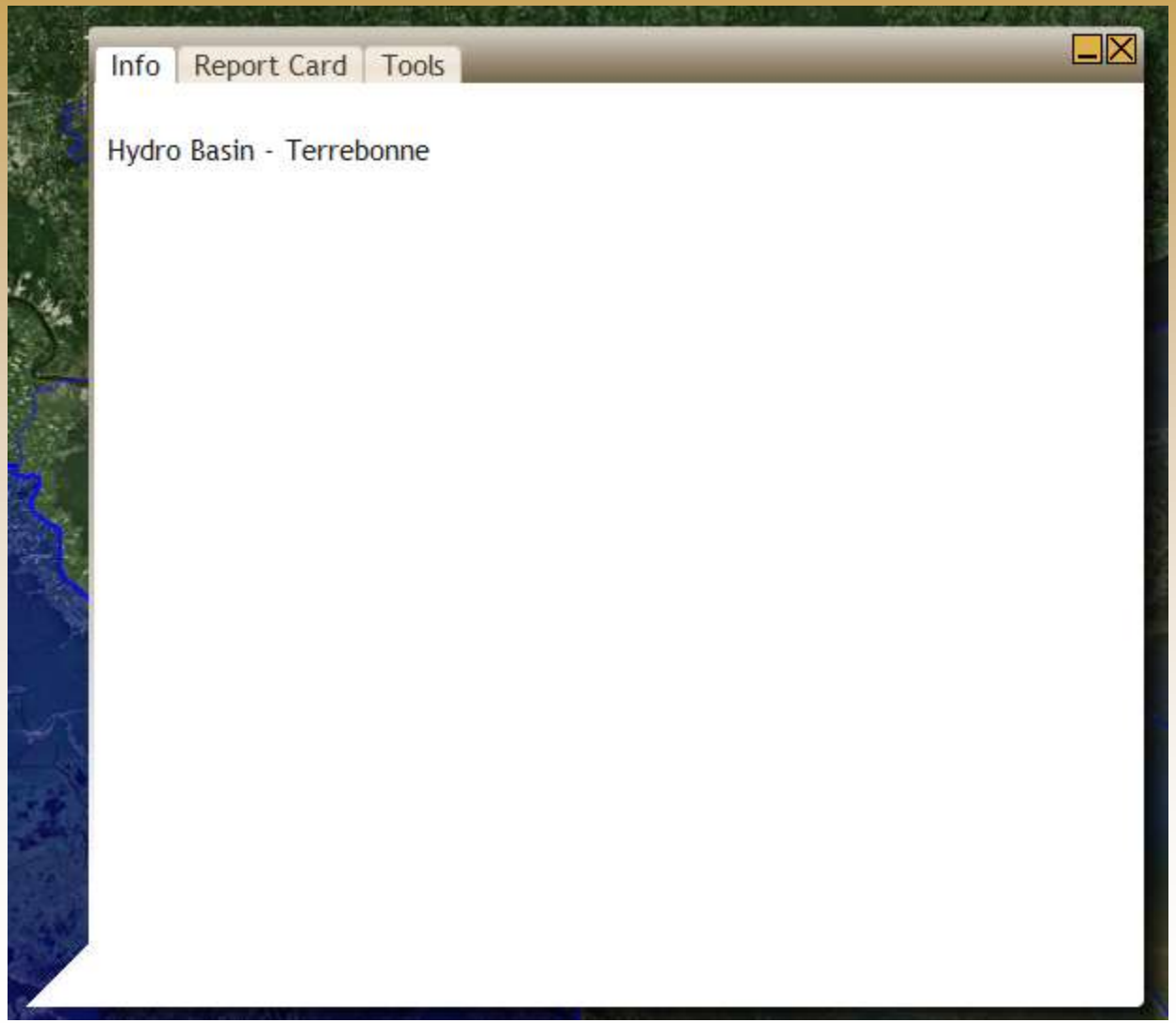
Hydro Basins Active Layer

Hydro Basins Active Layer



Hydro Basins Active Layer

Information Bubble

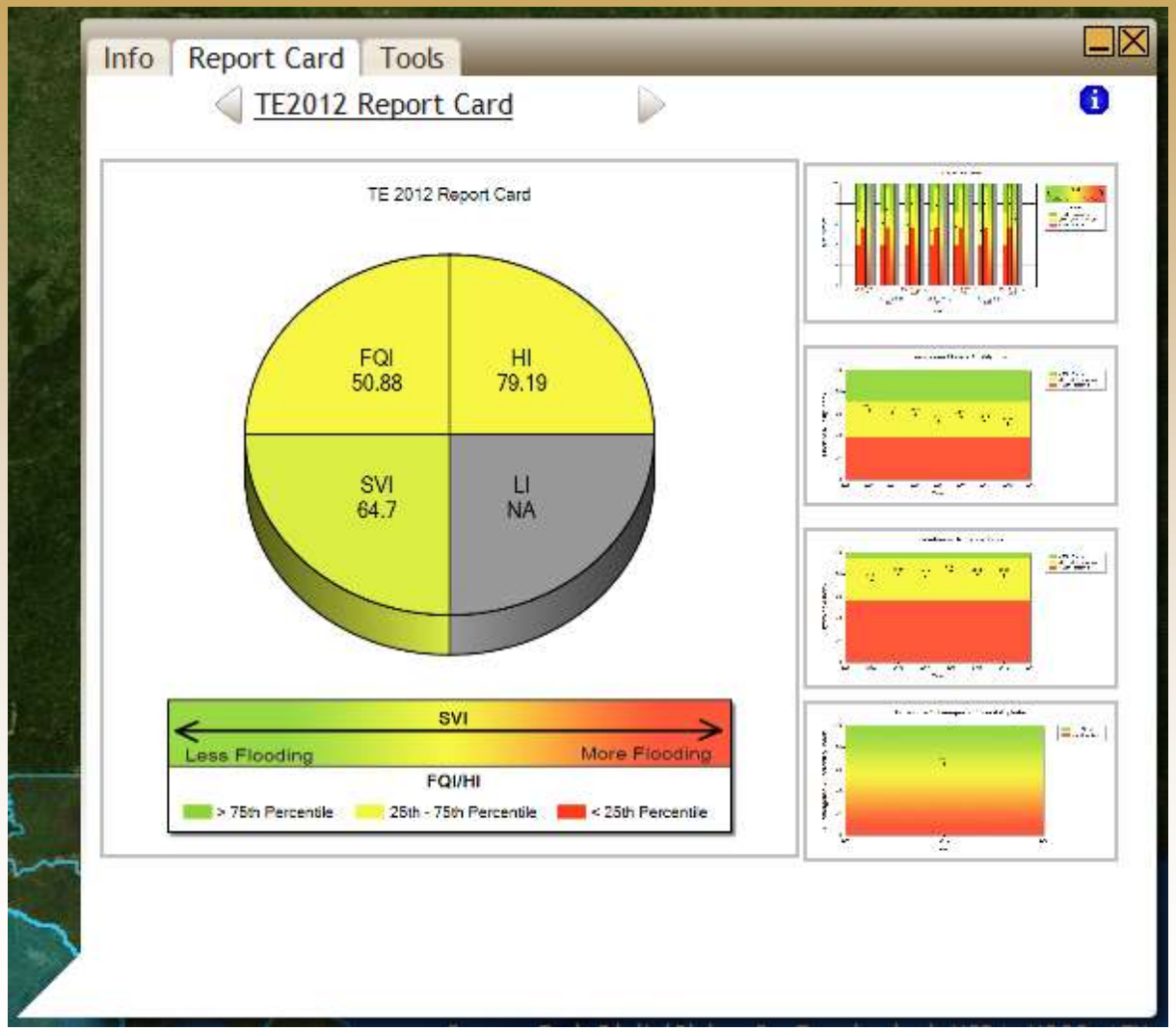


The information bubble appears when a Hydro Basin is clicked. The Basin Info tab is automatically chosen when the bubble pops up on the screen.

More basin level descriptive information will be posted soon….

Hydro Basins Active Layer

Information Bubble

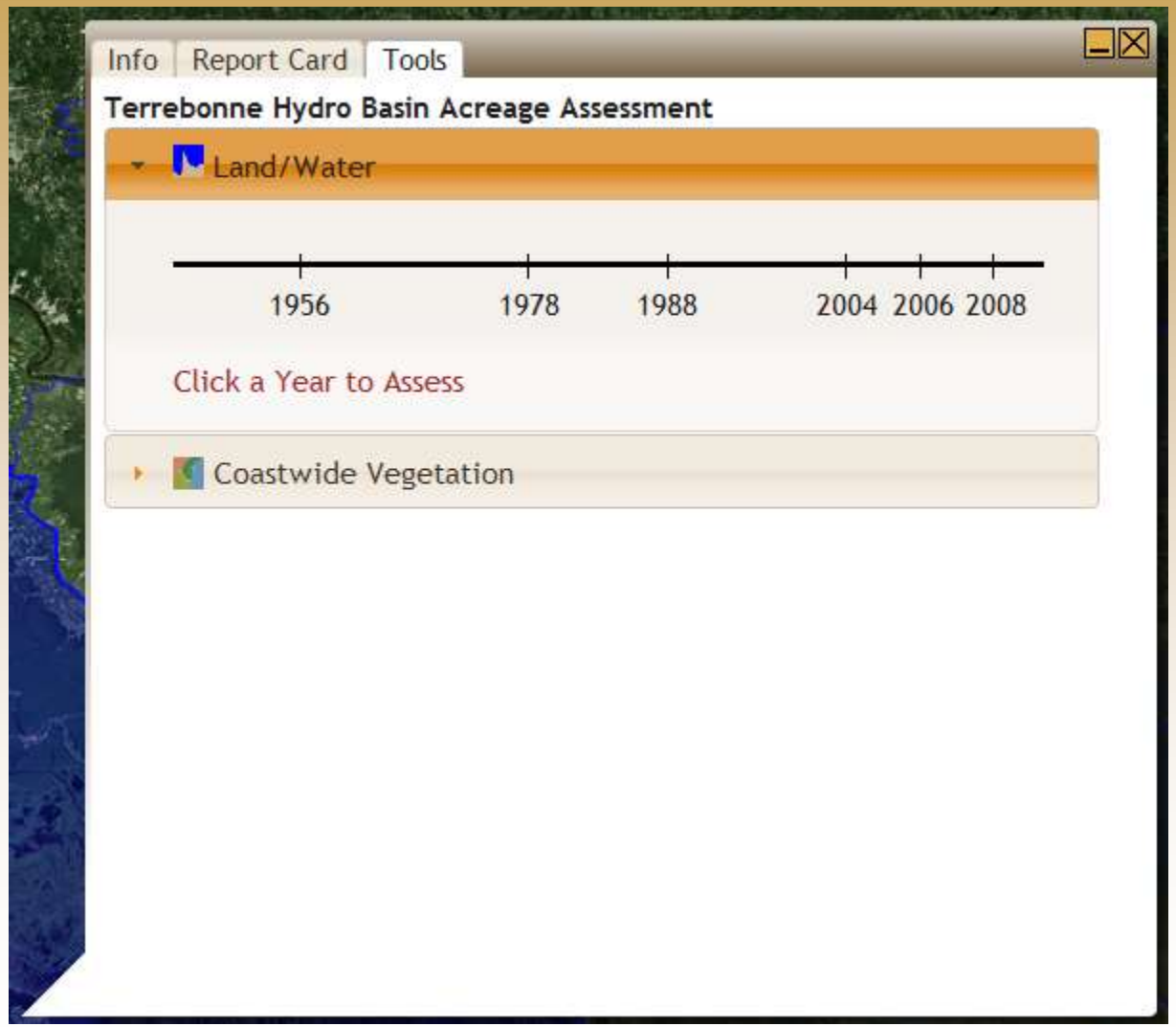


The Report Card tab contains all report card information for the selected basin.

Report Card – Summary of basin scale information compiled into a report card.

Hydro Basins Active Layer

Information Bubble

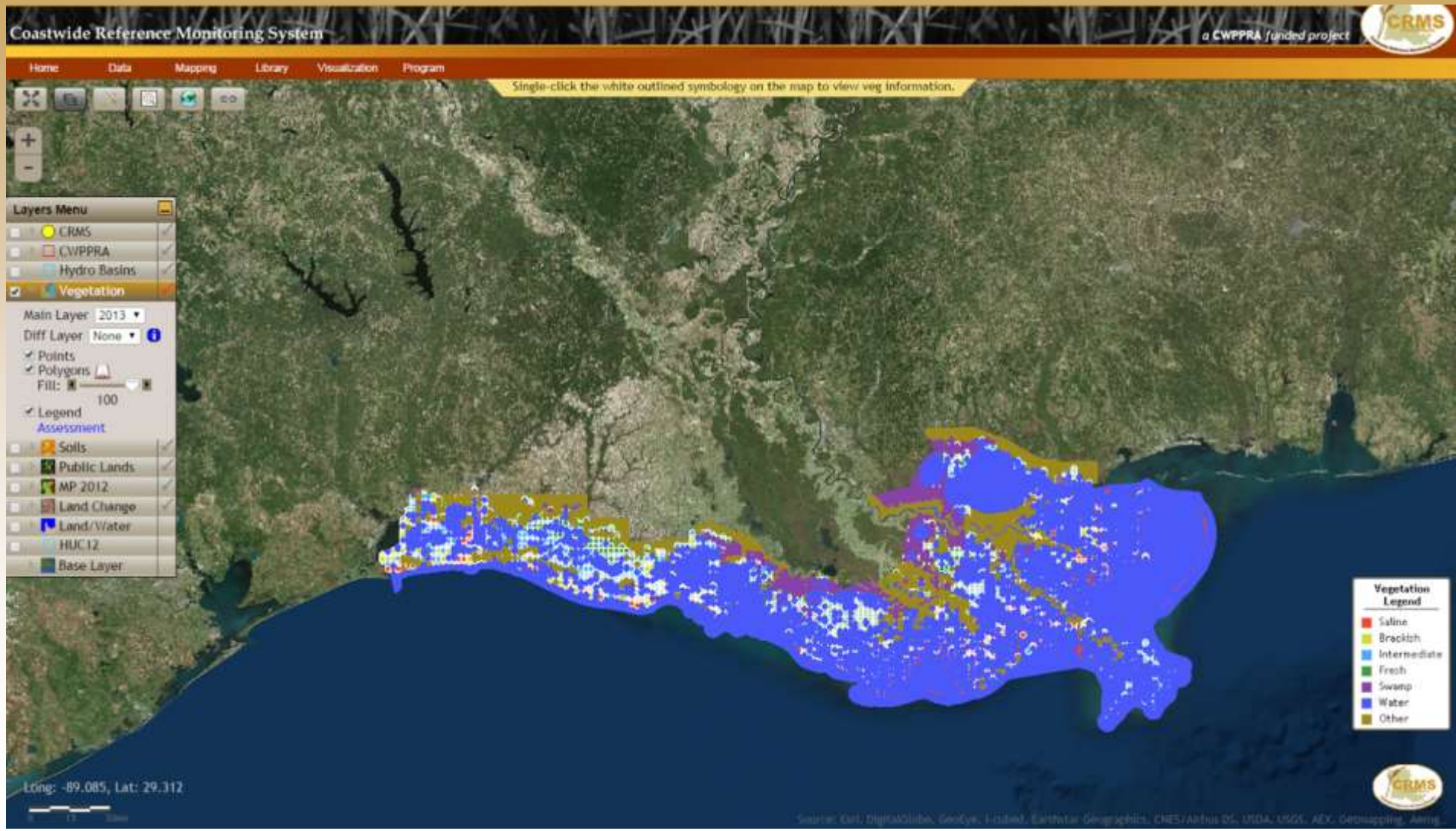


The Tools tab lets you do an Acreage Assessment on the selected basin.

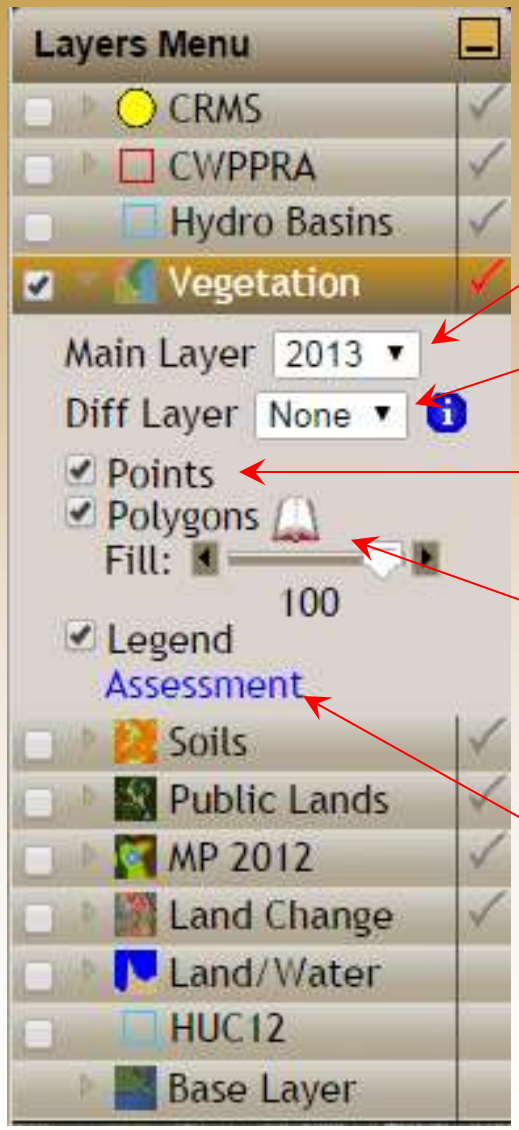
Acreage Assessment – Use the acreage assessment tool to determine acreage breakdowns of the available coastwide vegetation surveys or Land/Water data.

Vegetation Active Layer

Vegetation Active Layer



Vegetation Active Layer



Main Year selects the primary polygon layer on the map.

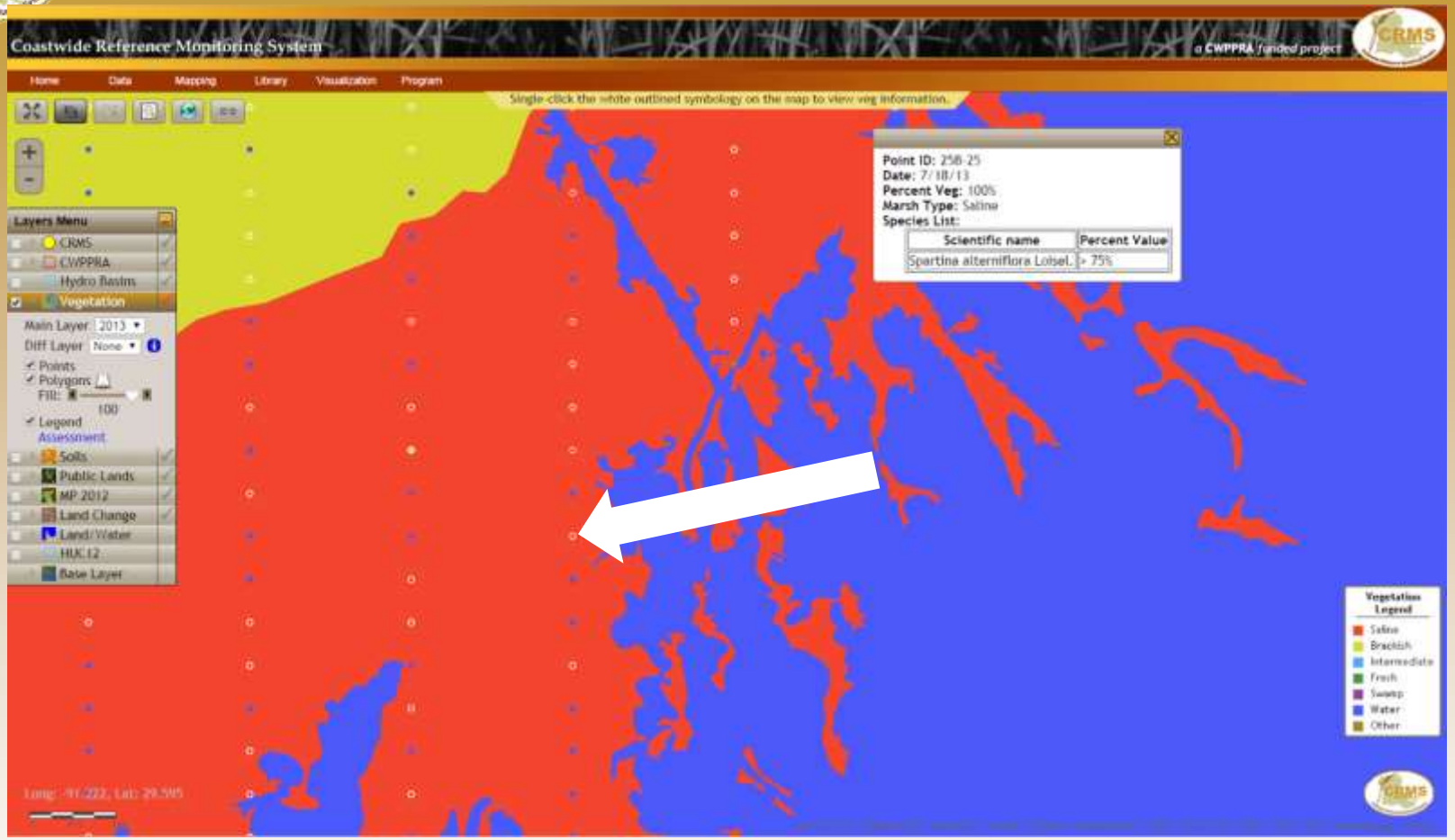
Diff Year selects the secondary polygon layer on the map.

Points checkbox adds/removes the Vegetation data points.

Checkbox adds/removes the Vegetation Polygons layer. The slider changes the transparency of the layer.

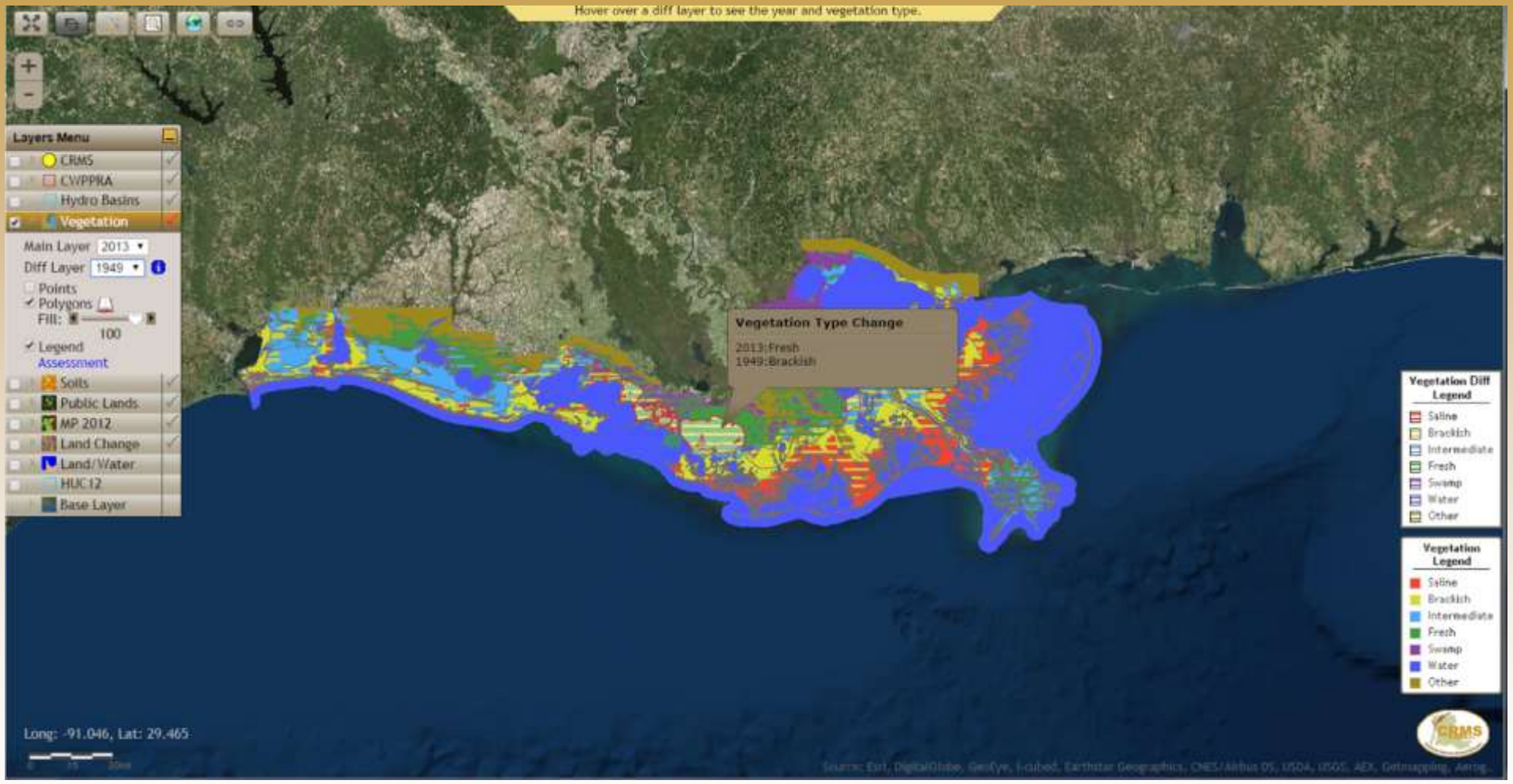
Assessment link invokes the acreage assessment tool menu for the currently selected year.

Vegetation Active Layer



If Points is checked, the site specific vegetation data is shown when clicked.

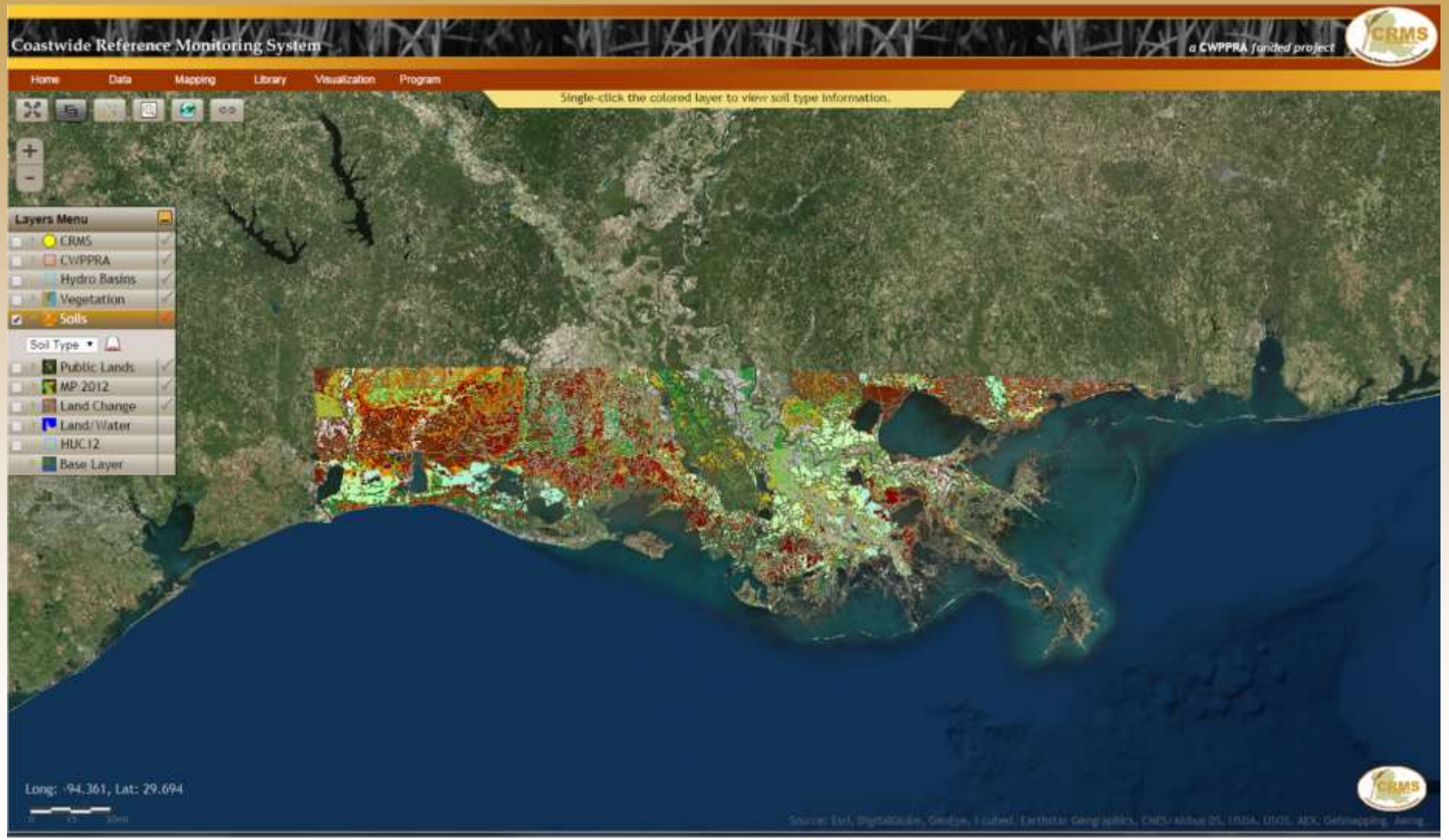
Vegetation Active Layer



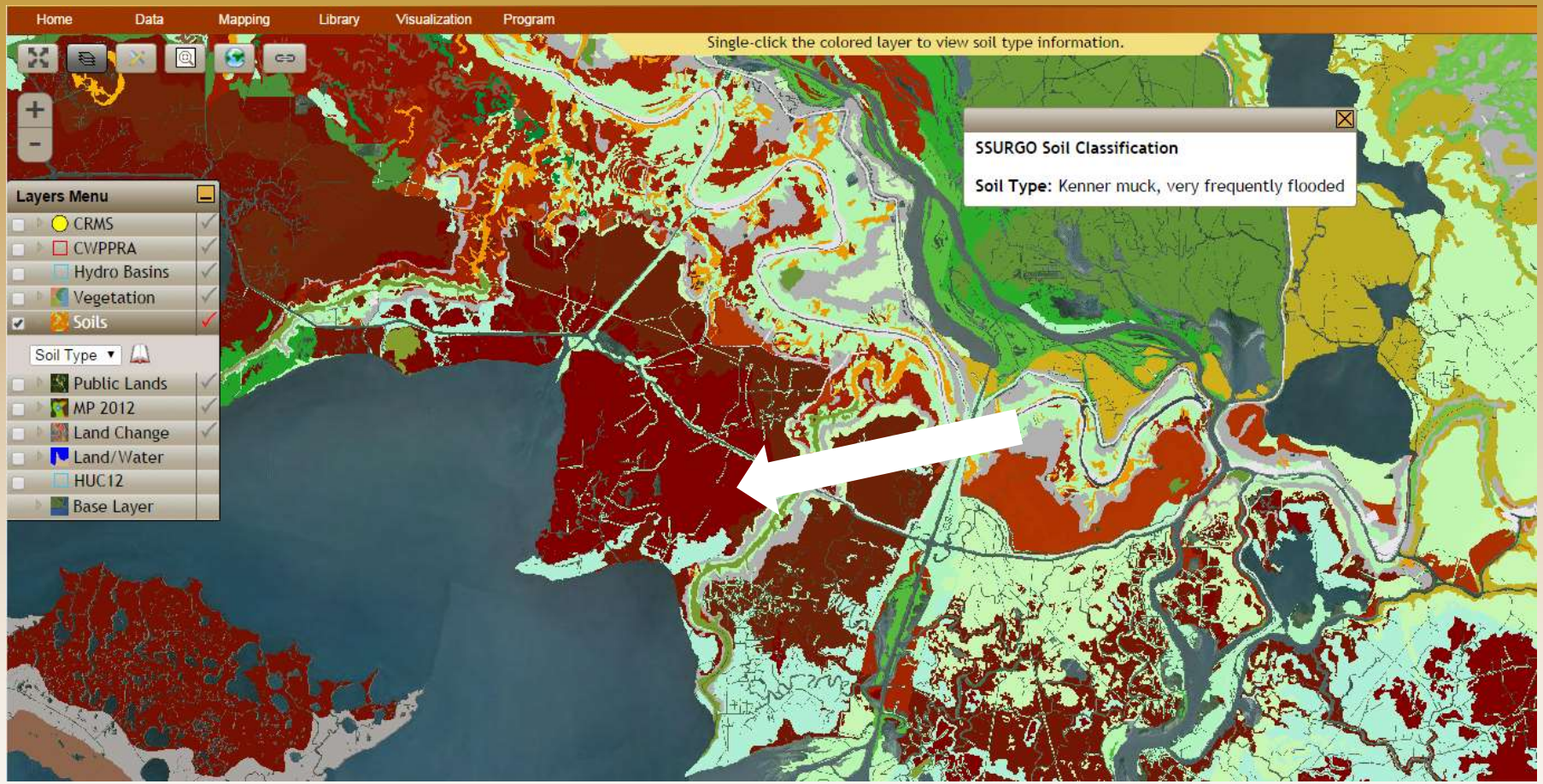
The Vegetation Type Change is shown when two different years are chosen for the Main Layer and Diff Layer.

Soils Active Layer

Soils Active Layer



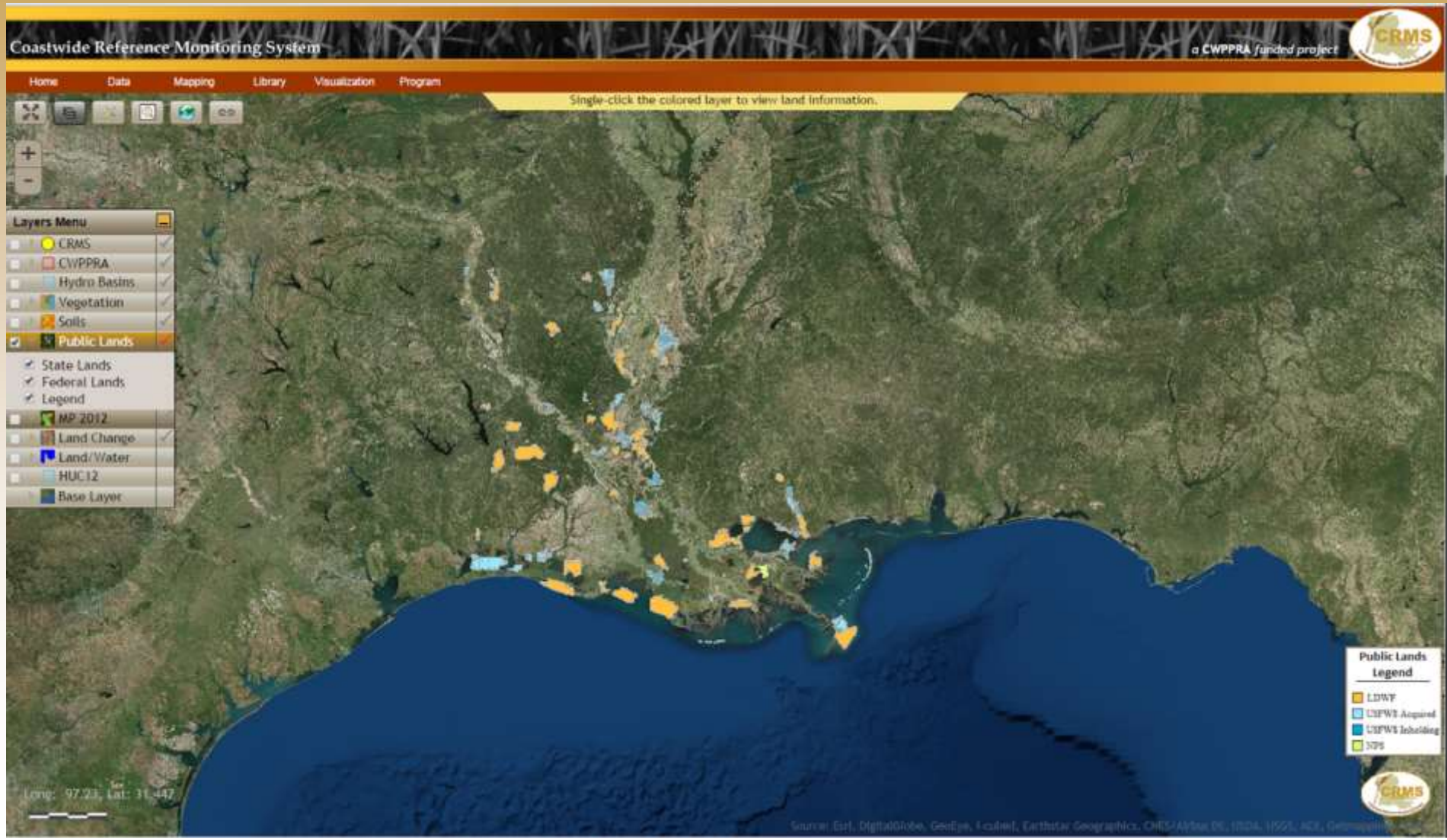
Soils Active Layer



The Soil Type information window pops up when a soil area is clicked.

Public Lands Active Layer

Public Lands Active Layer

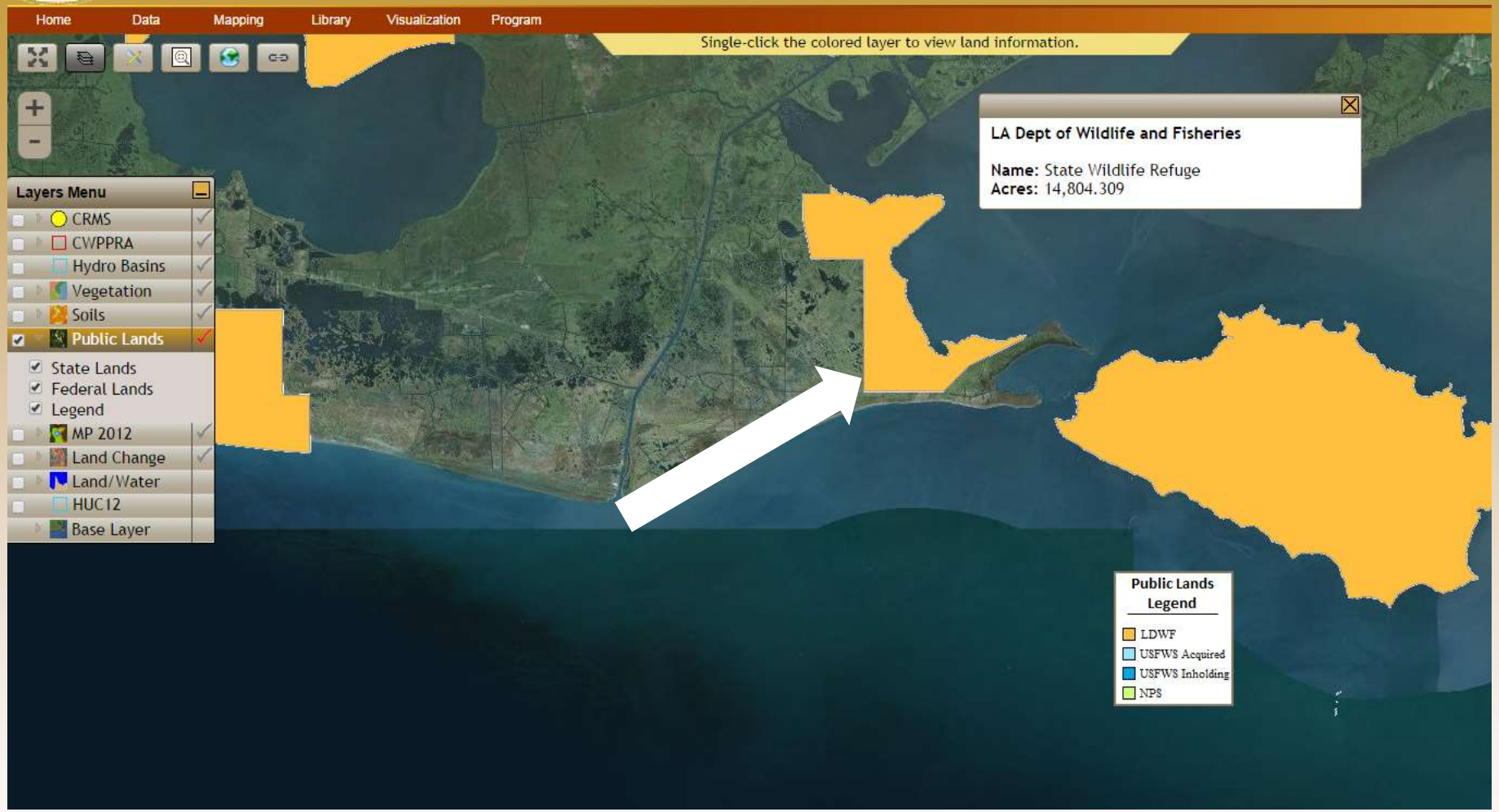


Public Lands Active Layer

State Lands checkbox adds/removes LA Department of Wildlife and Fisheries layer.

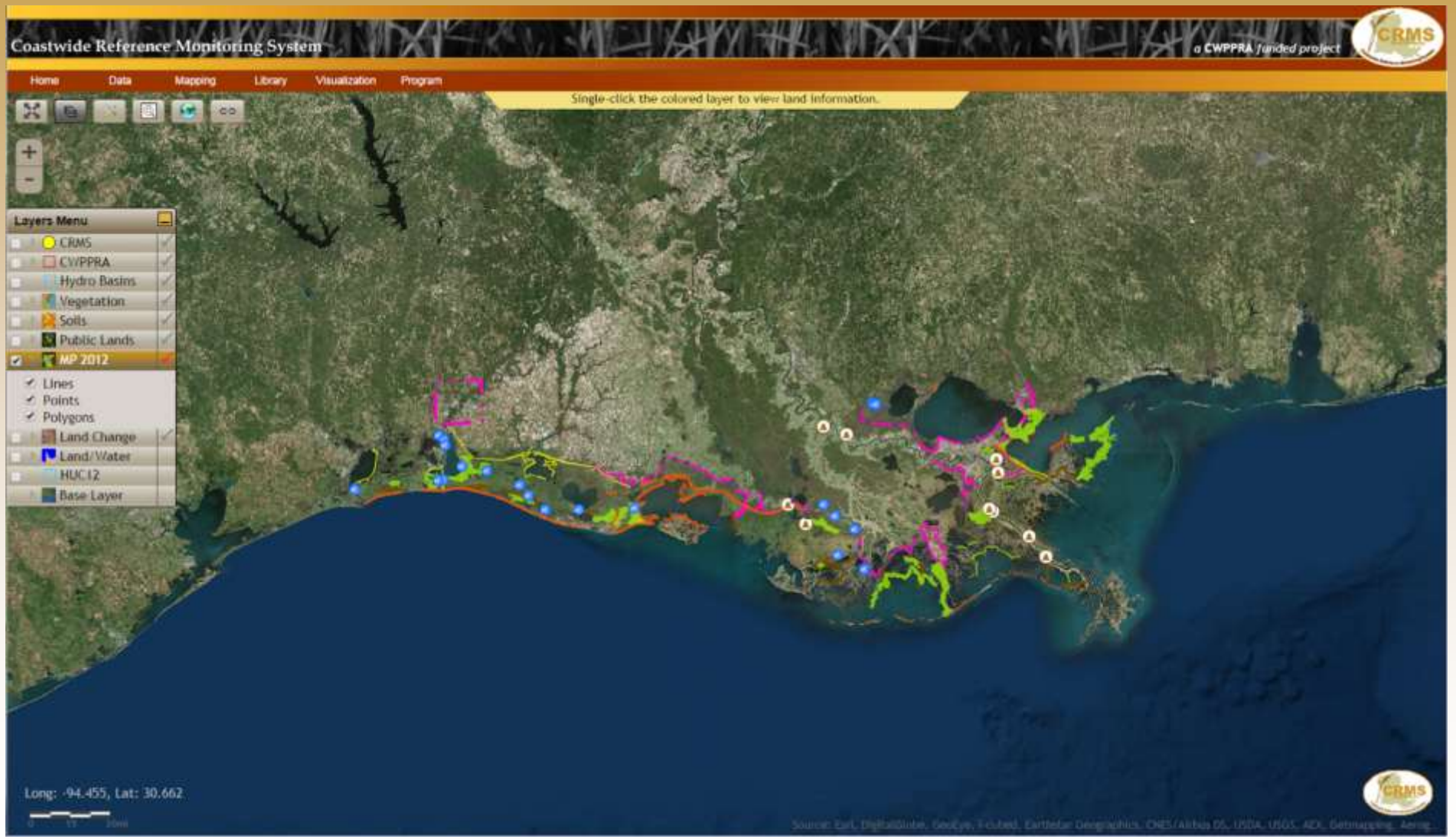
Federal Lands checkbox adds/removes National Park Service and US Fish and Wildlife Service.

Public Lands Active Layer



The Public Lands information window pops up when a Public Lands polygon is clicked.

Master Plan 2012



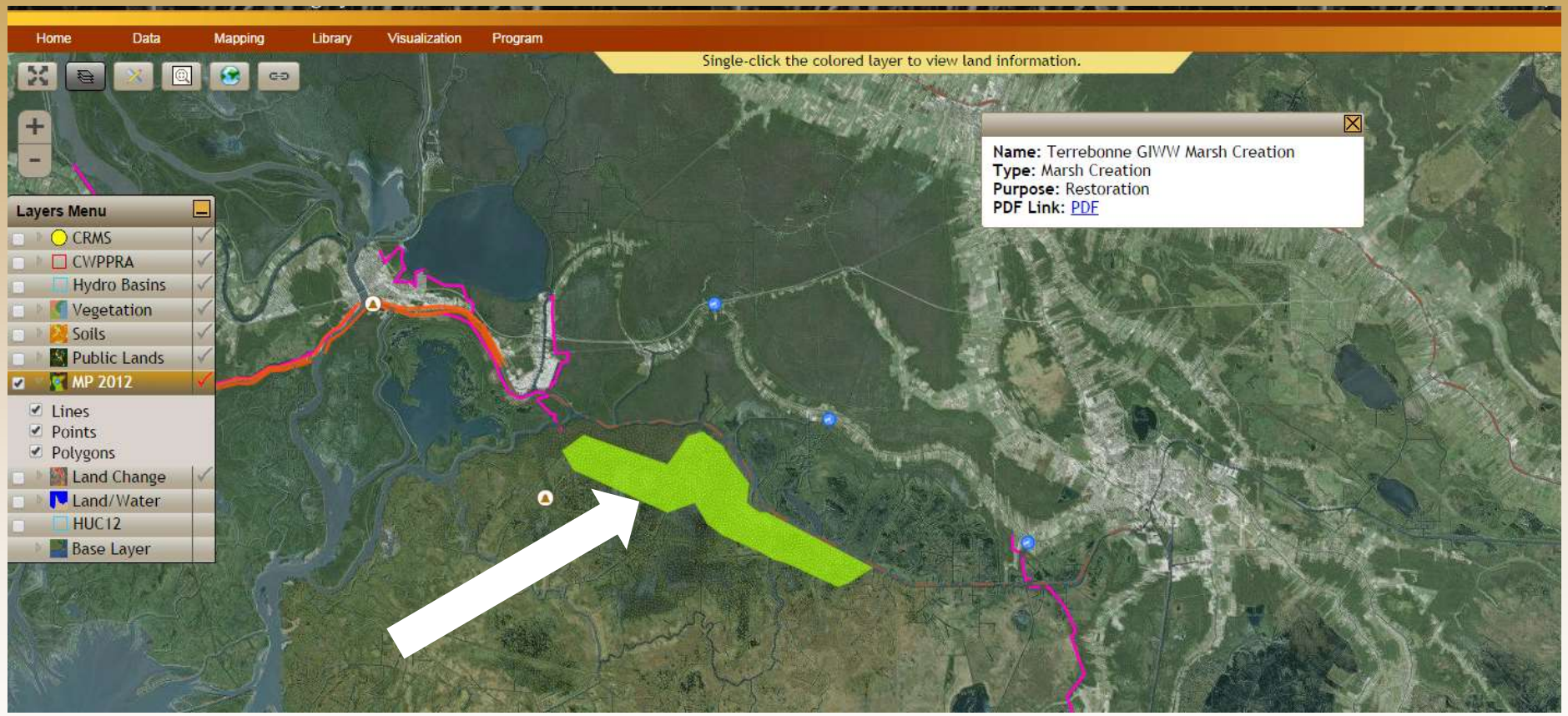
Master Plan 2012

Checkbox to put the lines of the Master Plan 2012 on the map

Checkbox to put the points of the Master Plan 2012 on the map

Checkbox to put the polygons of the Master Plan 2012 on the map

Master Plan 2012

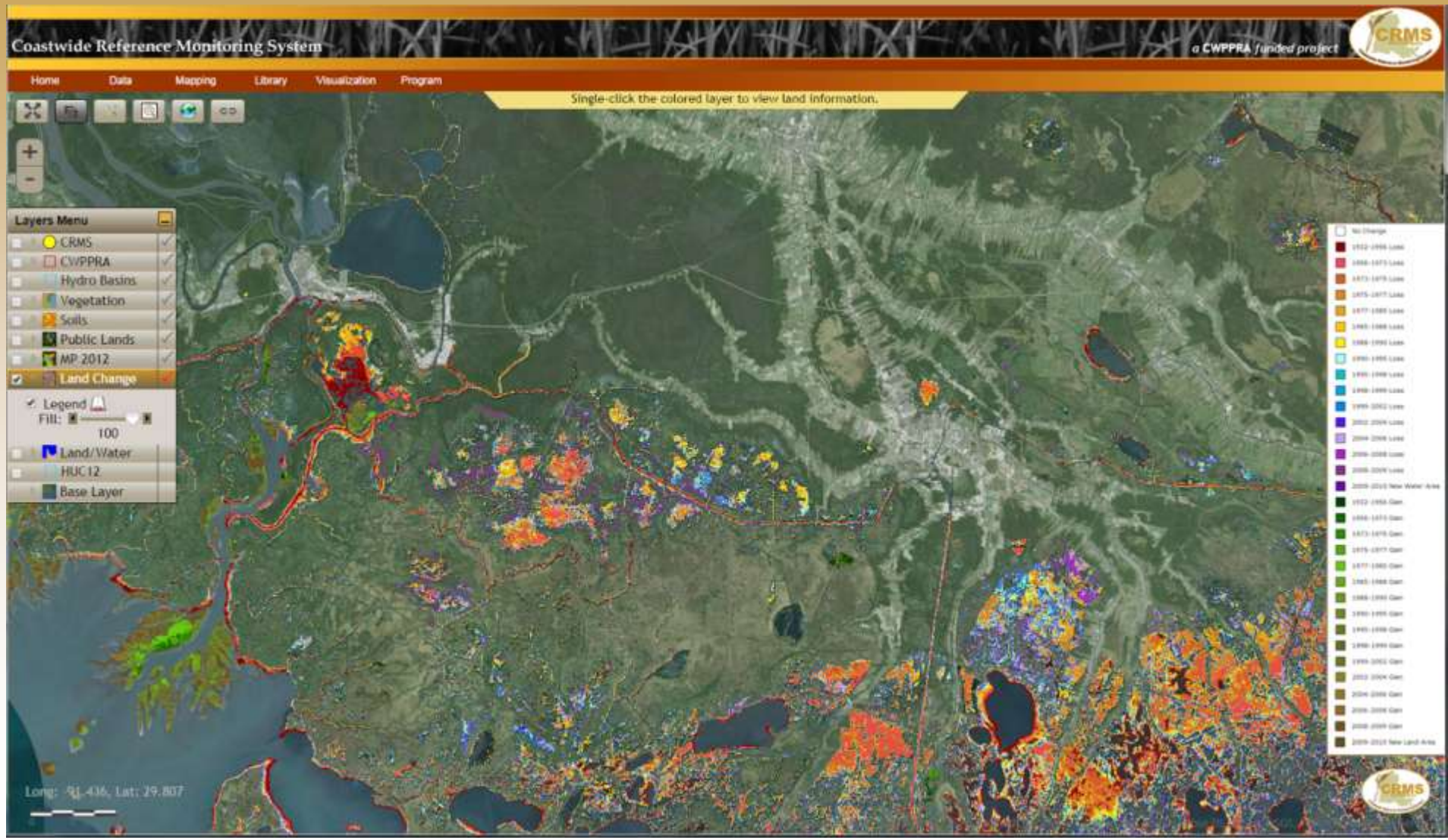


The Master Plan information window pops up when a Master Plan polygon is clicked.

Land Change Layer

Land Change Layer

Couvillion et al., Land Area Change in Coastal Louisiana from 1932 to 2010



Land Change Layer

Checkbox to put the legend on the map.

Slider to change the opacity of the layer on the map.

Other Layers

Other Layers

Land/Water

Land/Water

Changes the Land/Water layer's year.

Slider changes the transparency of the layer.

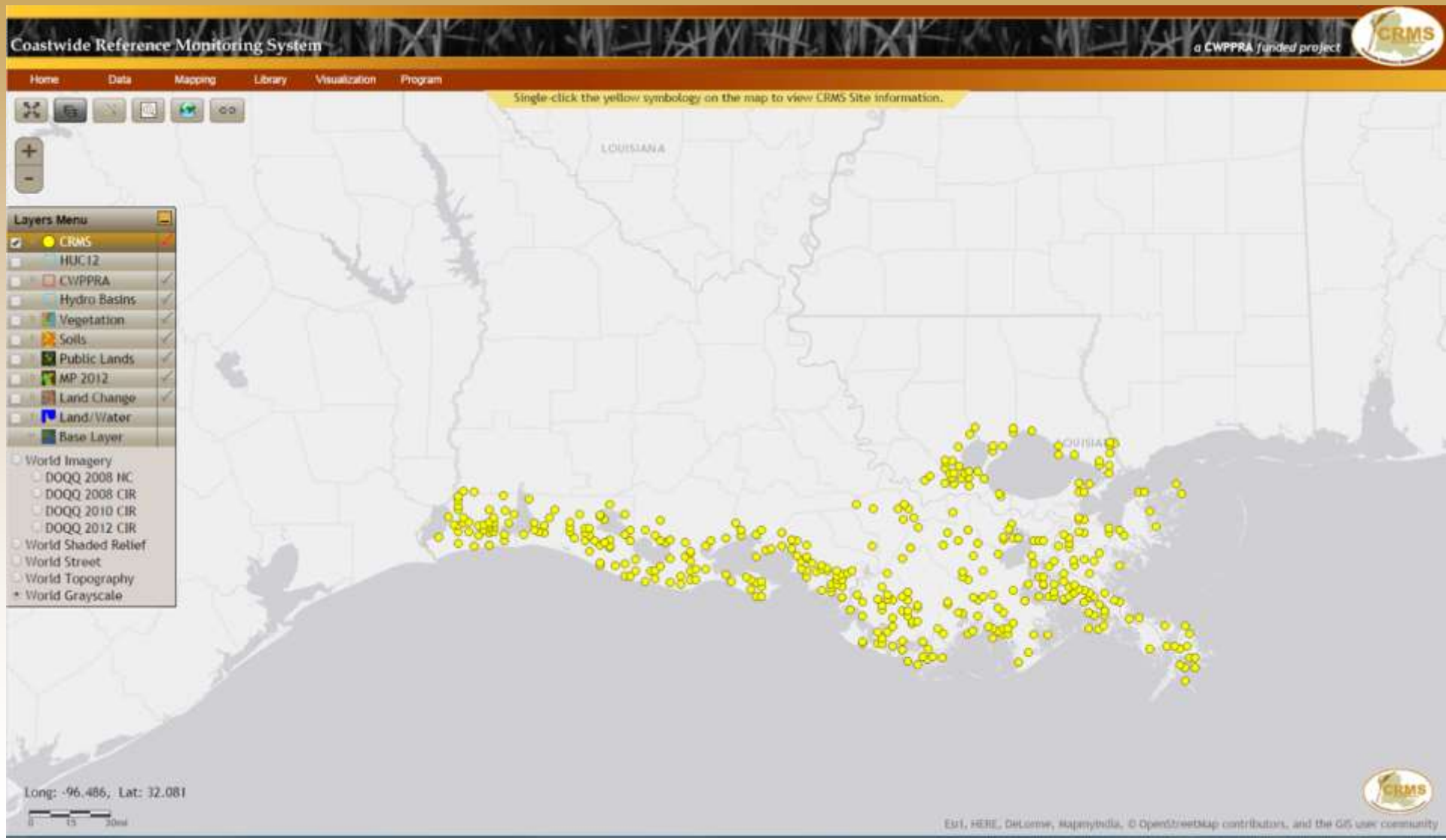
Assessment link invokes the acreage assessment tool menu for the currently selected year.

HUC12 Layer

NRCS's Watershed Boundary Dataset

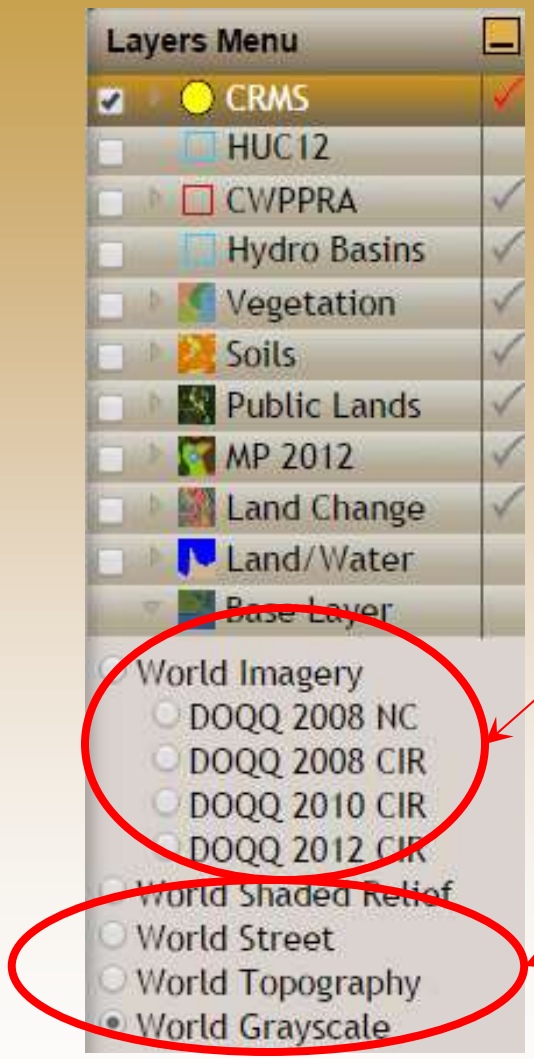
Other Layers

Base Layers



Other Layers

Base Layers



DOQQ radio buttons add the selected DOQQ layer to the map.

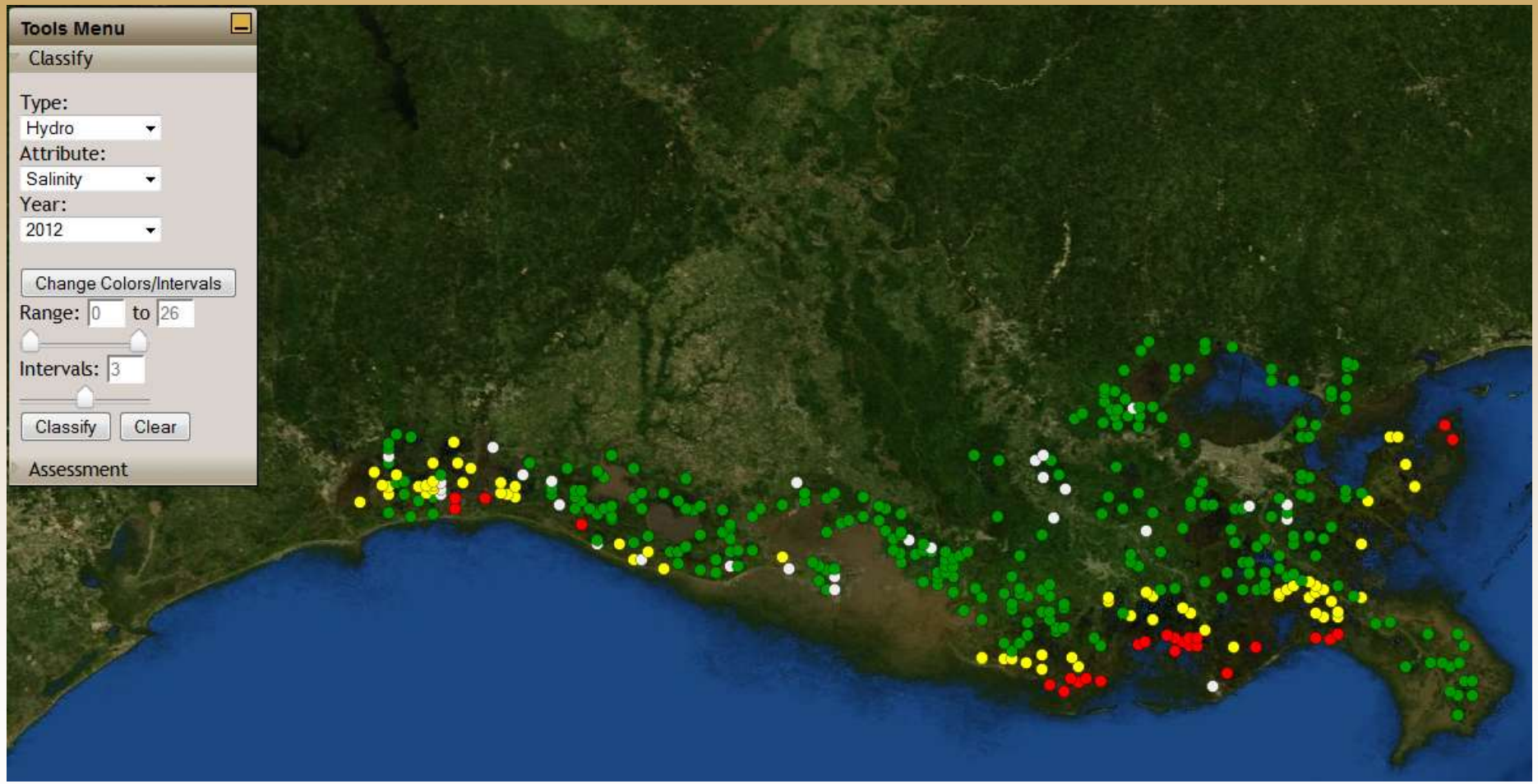
Other radio buttons change the base/background layer of the map.

Classify Tool

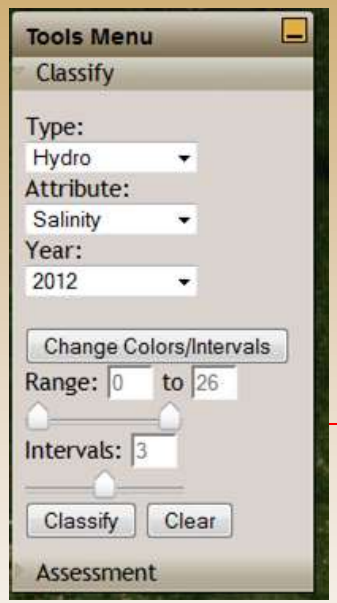
A Type, Attribute, and Year must be chosen to Classify the CRMS sites. All of the Attributes except for the Marsh Classification have a color chooser option.

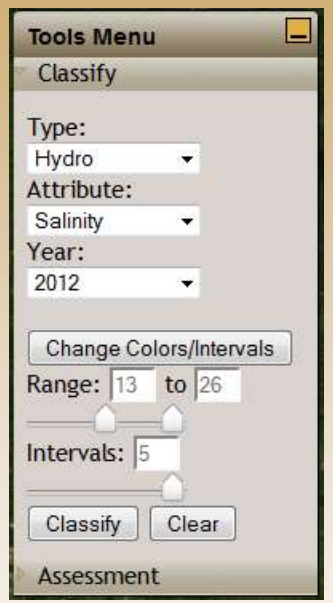
- Vegetation
  - FQI
  - Marsh Classification
- Hydro
  - Hydro Index
  - Salinity
  - Water Level
- Soil
  - Calculated Elevation Change (CEC)
  - Submergence Vulnerability Index (SVI)

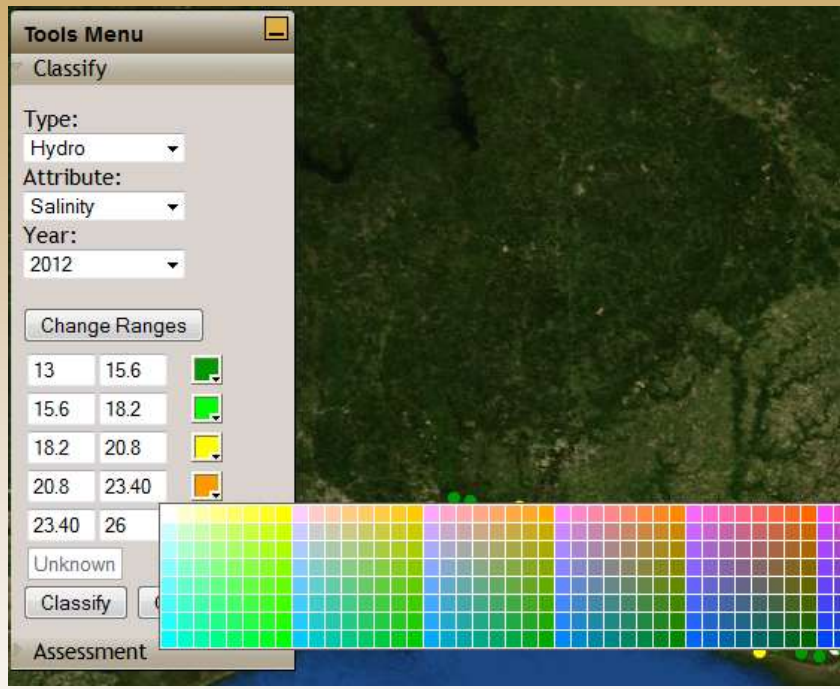
Classify Tool



Classify Tool







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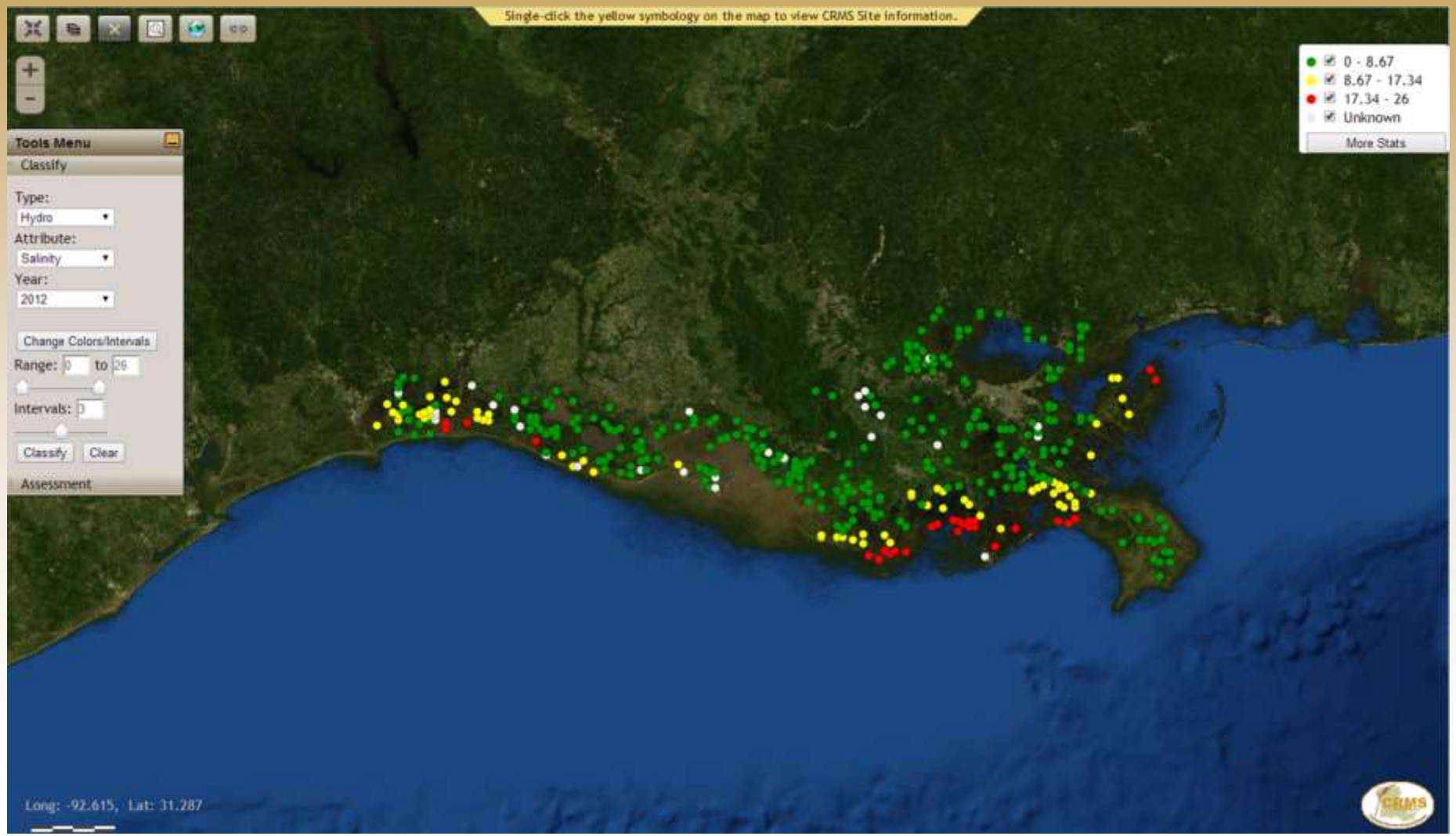
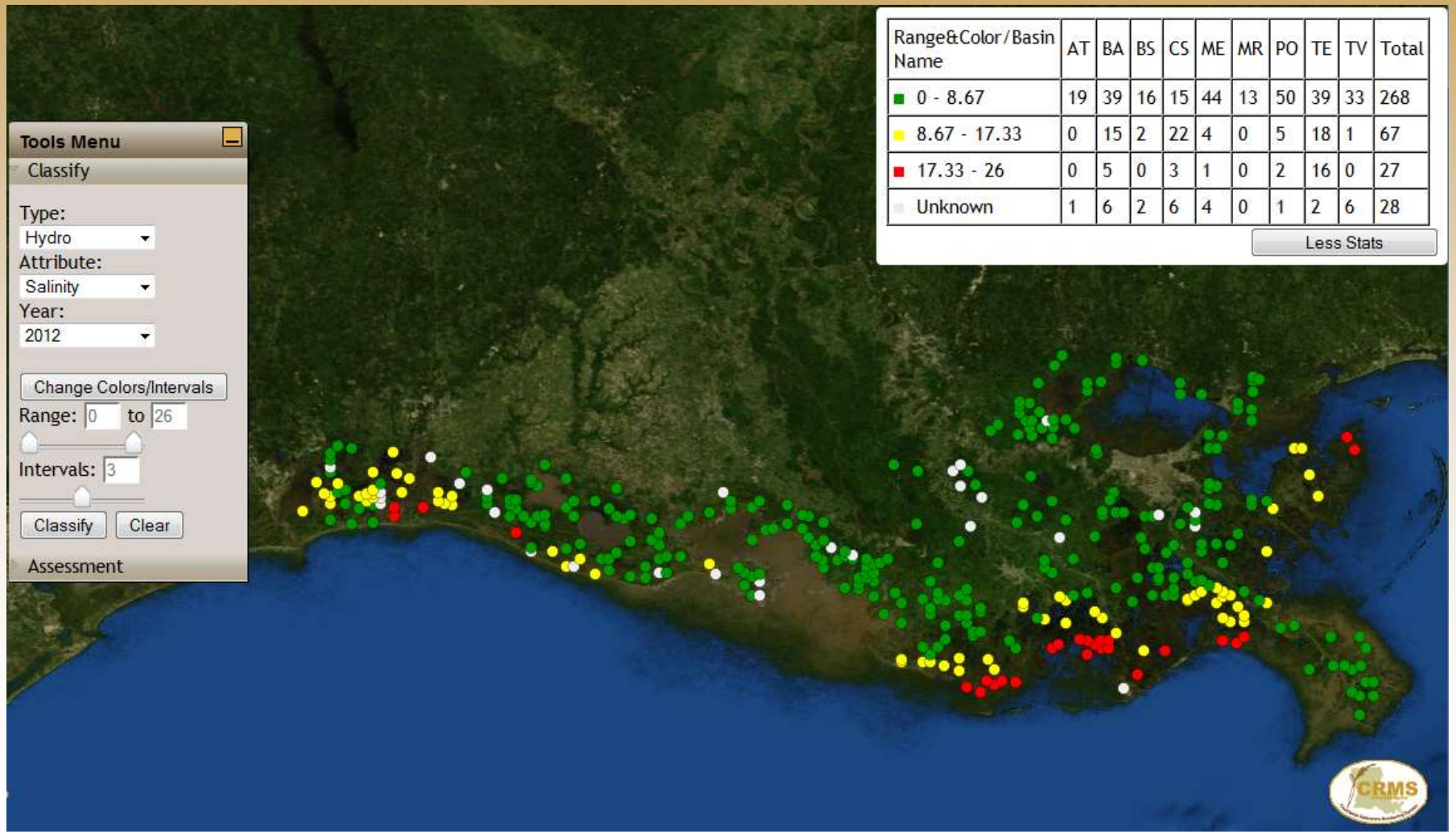
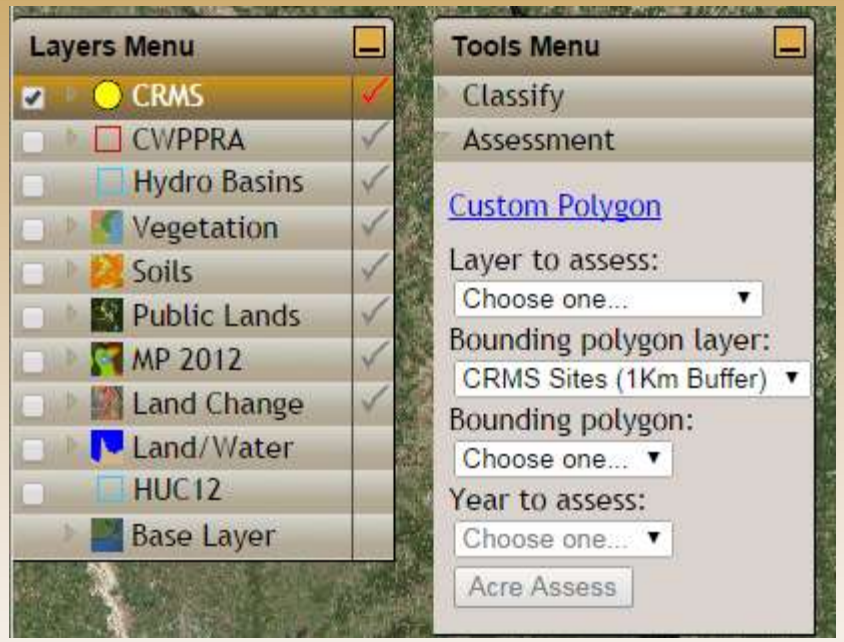


Classify Tool



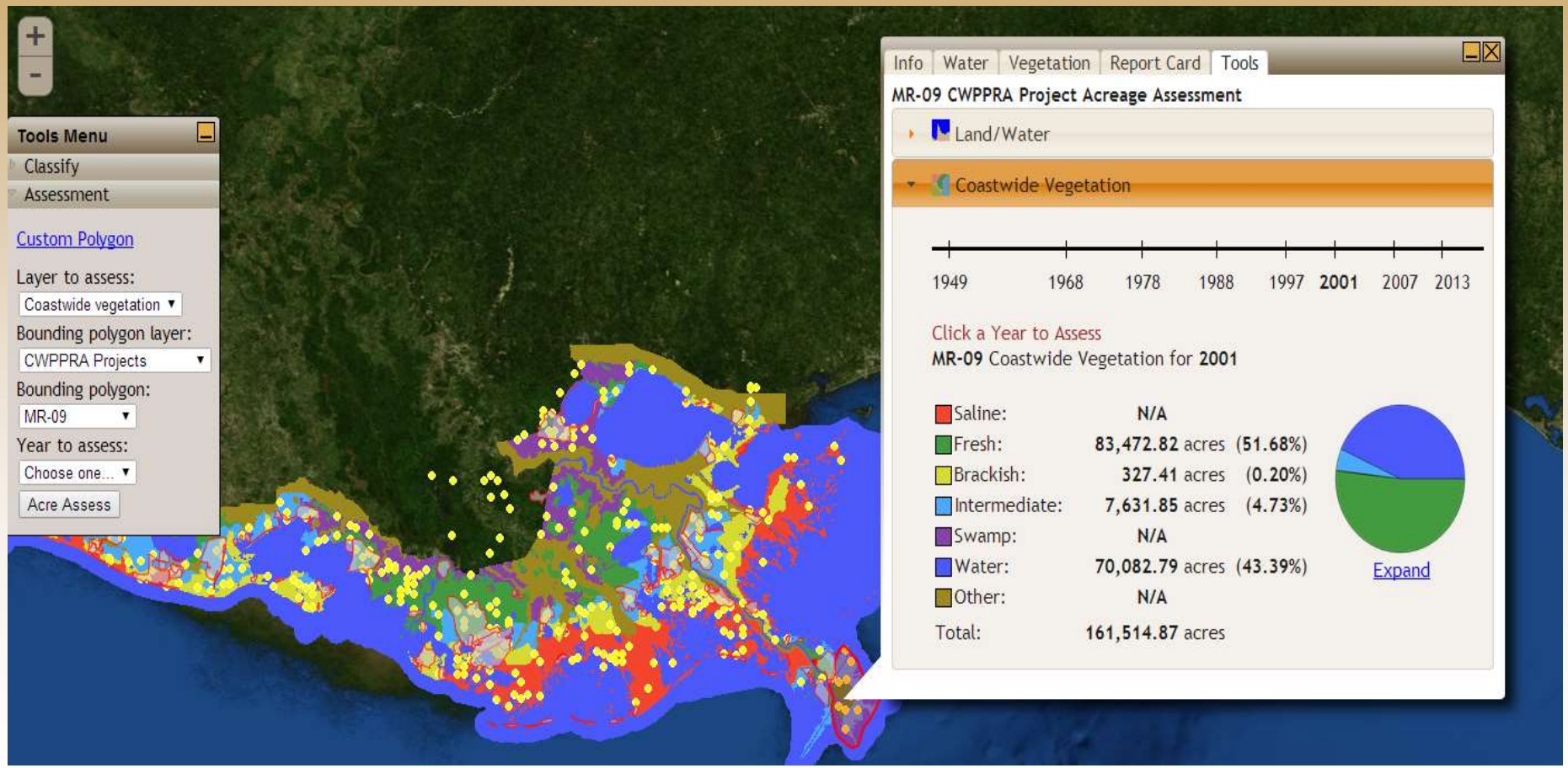
Acreage Assessment Tool



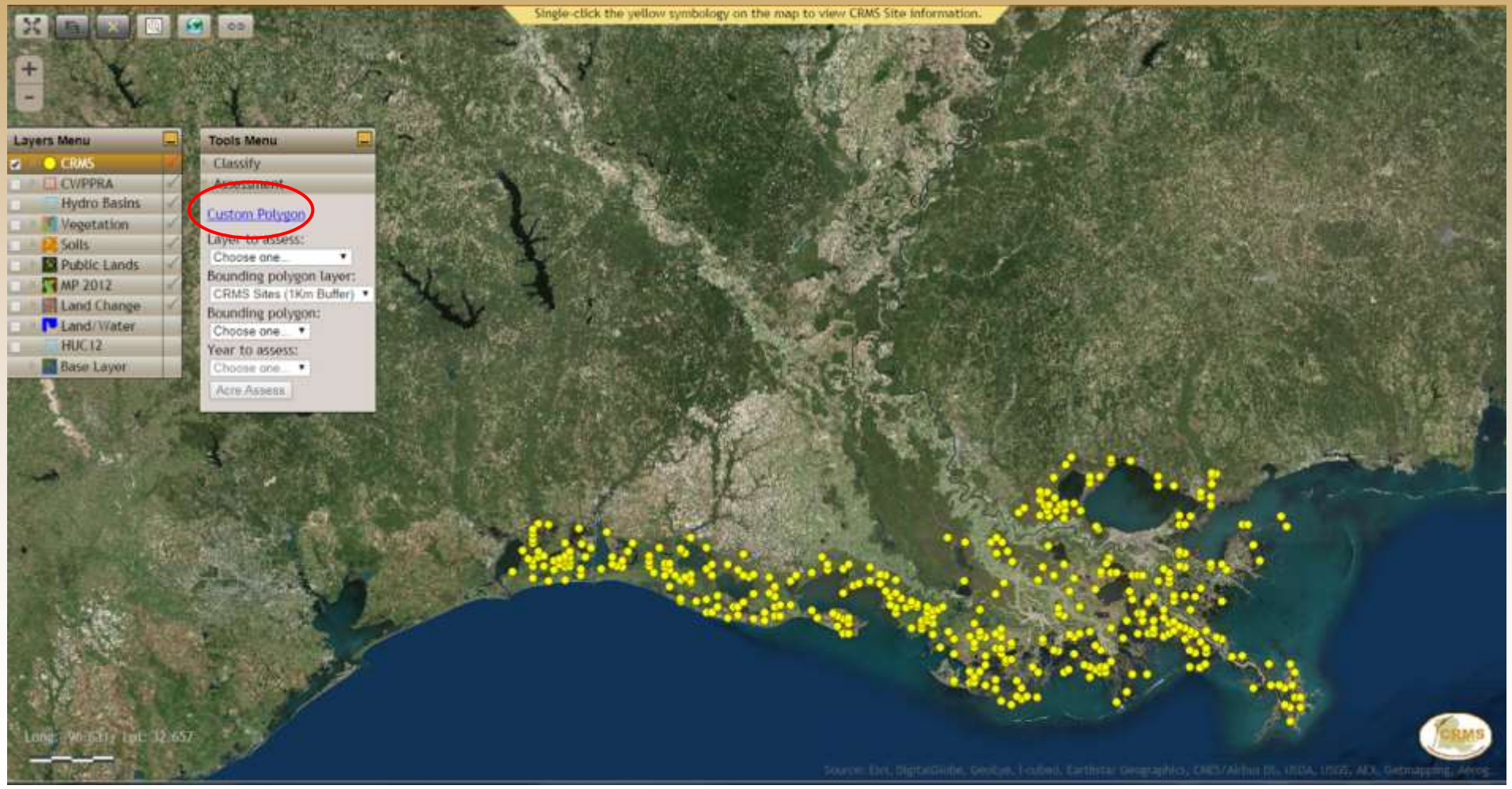
A custom polygon can be drawn on the map to assess the area of the polygon drawn.

A Type, Attribute, and Year must be chosen to classify the CRMS sites. All of the attributes except for the Marsh Classification have a color chooser option.

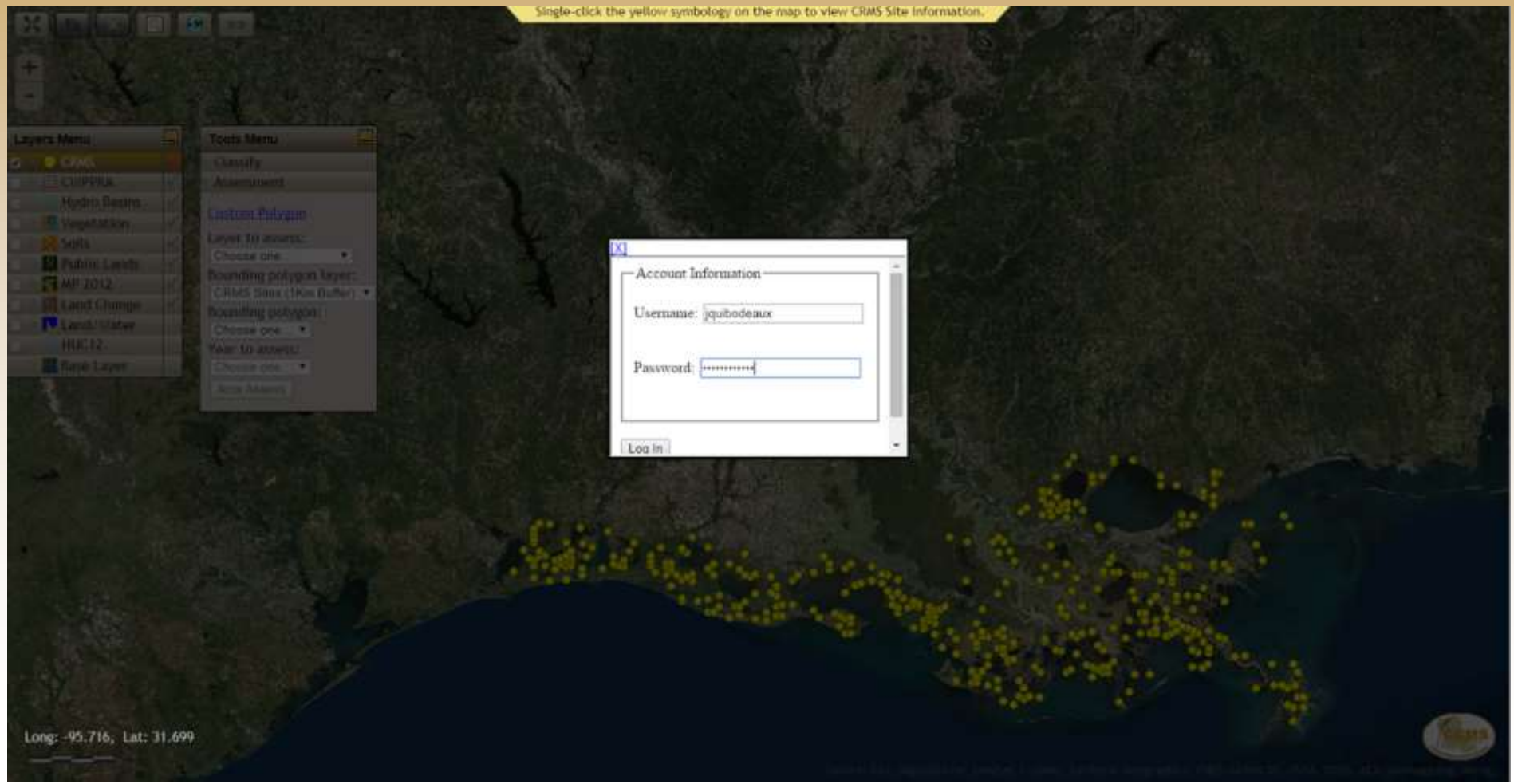
Acreage Assessment Tool



Custom Acreage Assessment



Request Password:
E-mail: jquibodeaux@usgs.gov



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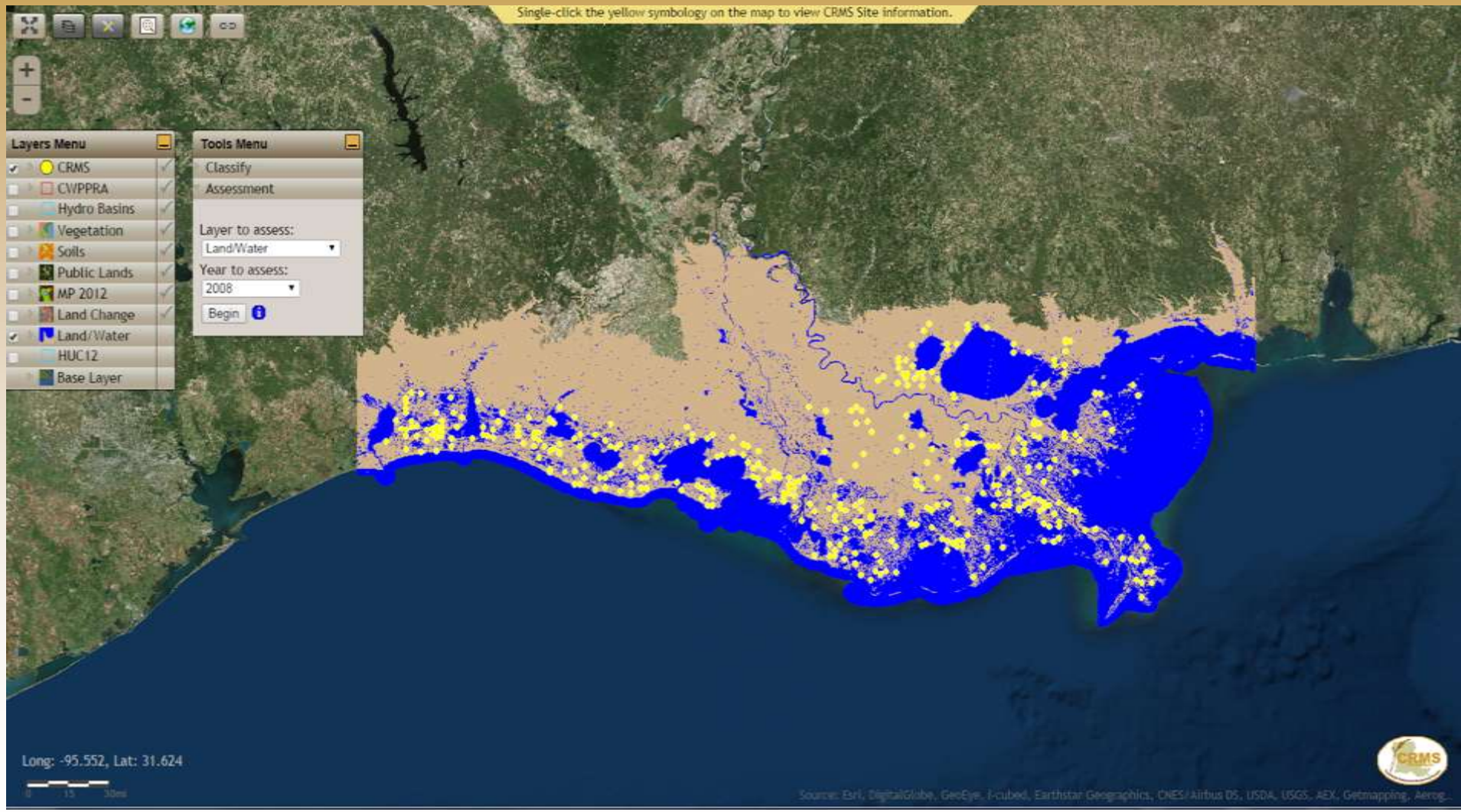

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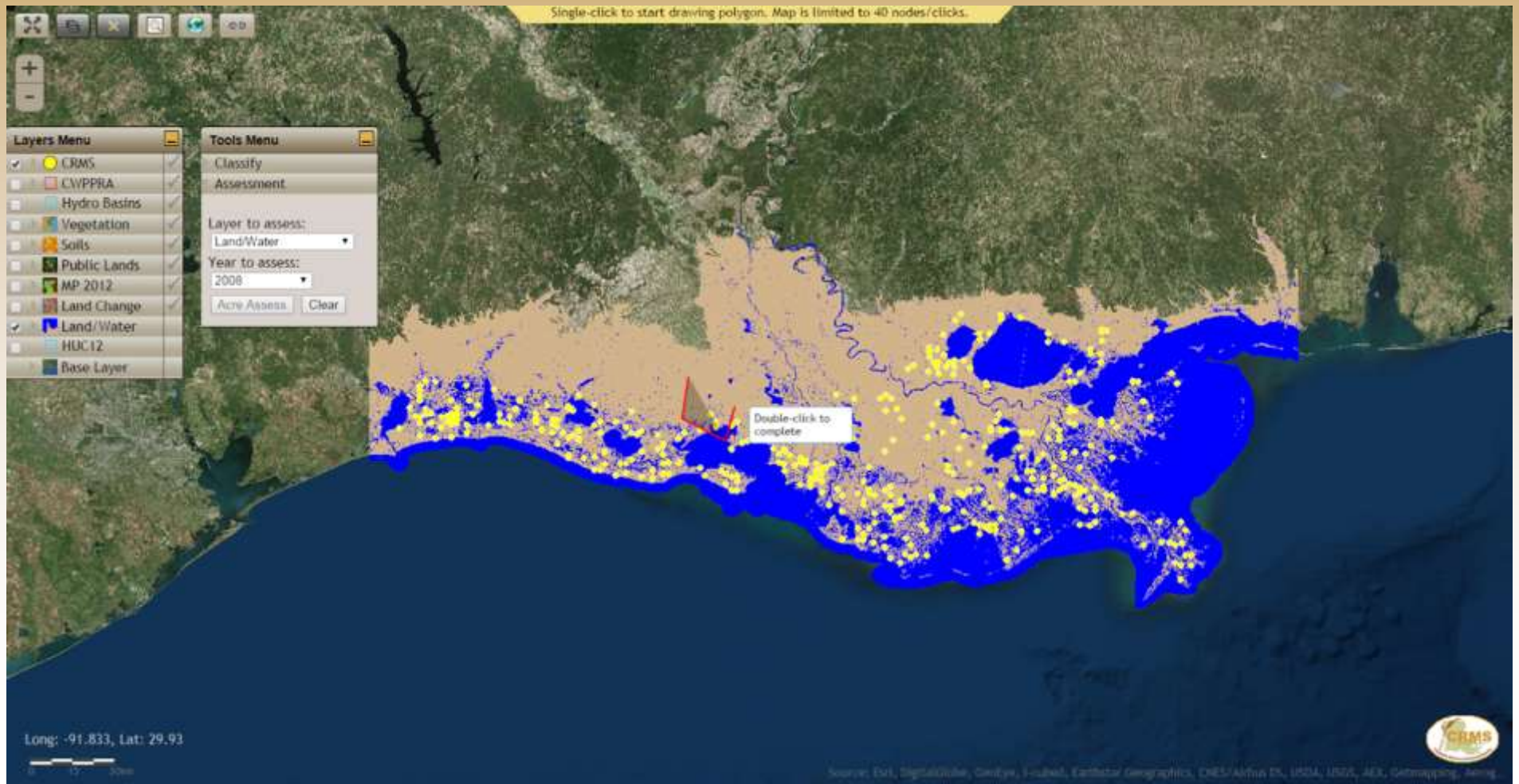

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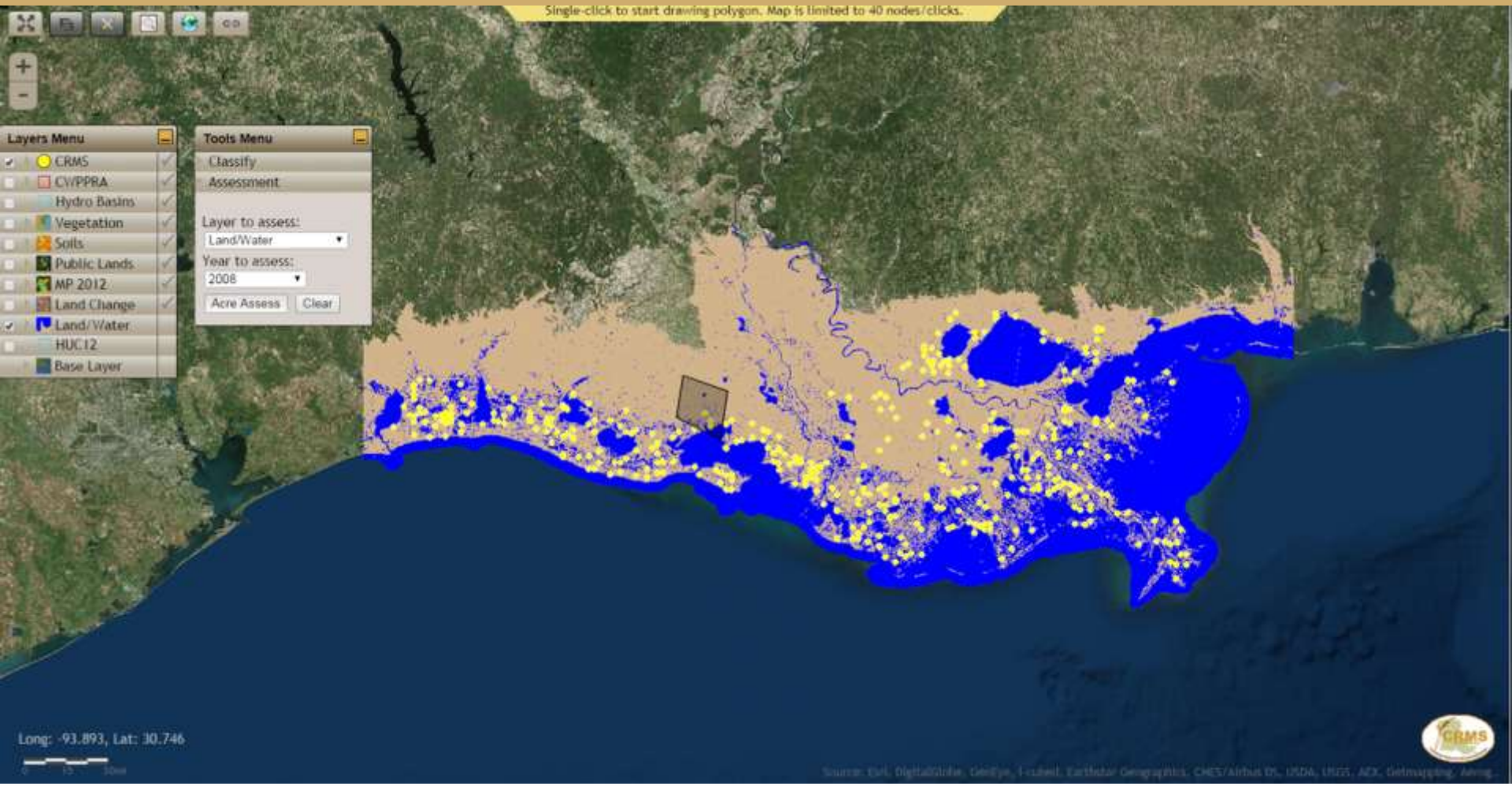
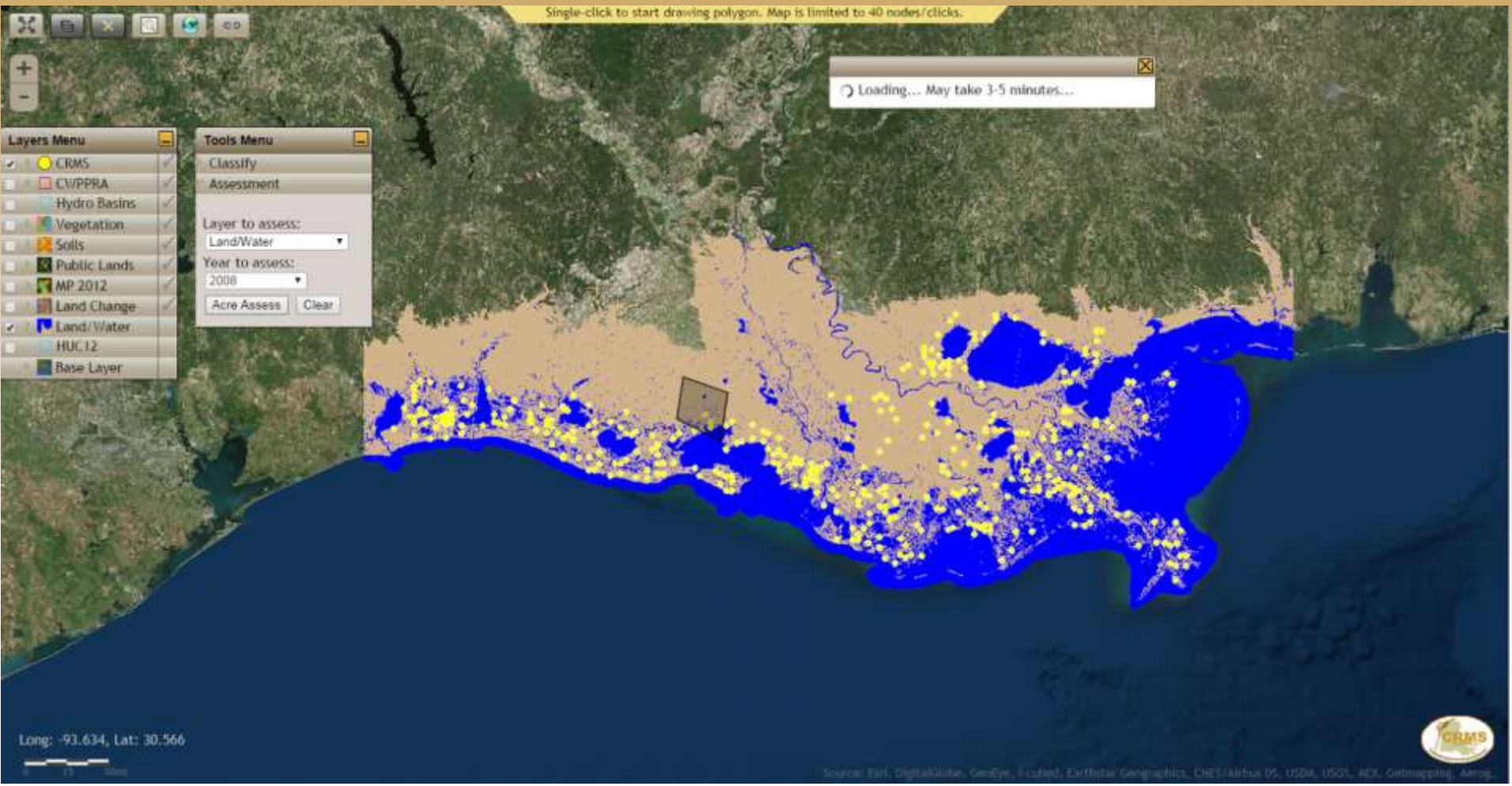


Custom Acreage Assessment



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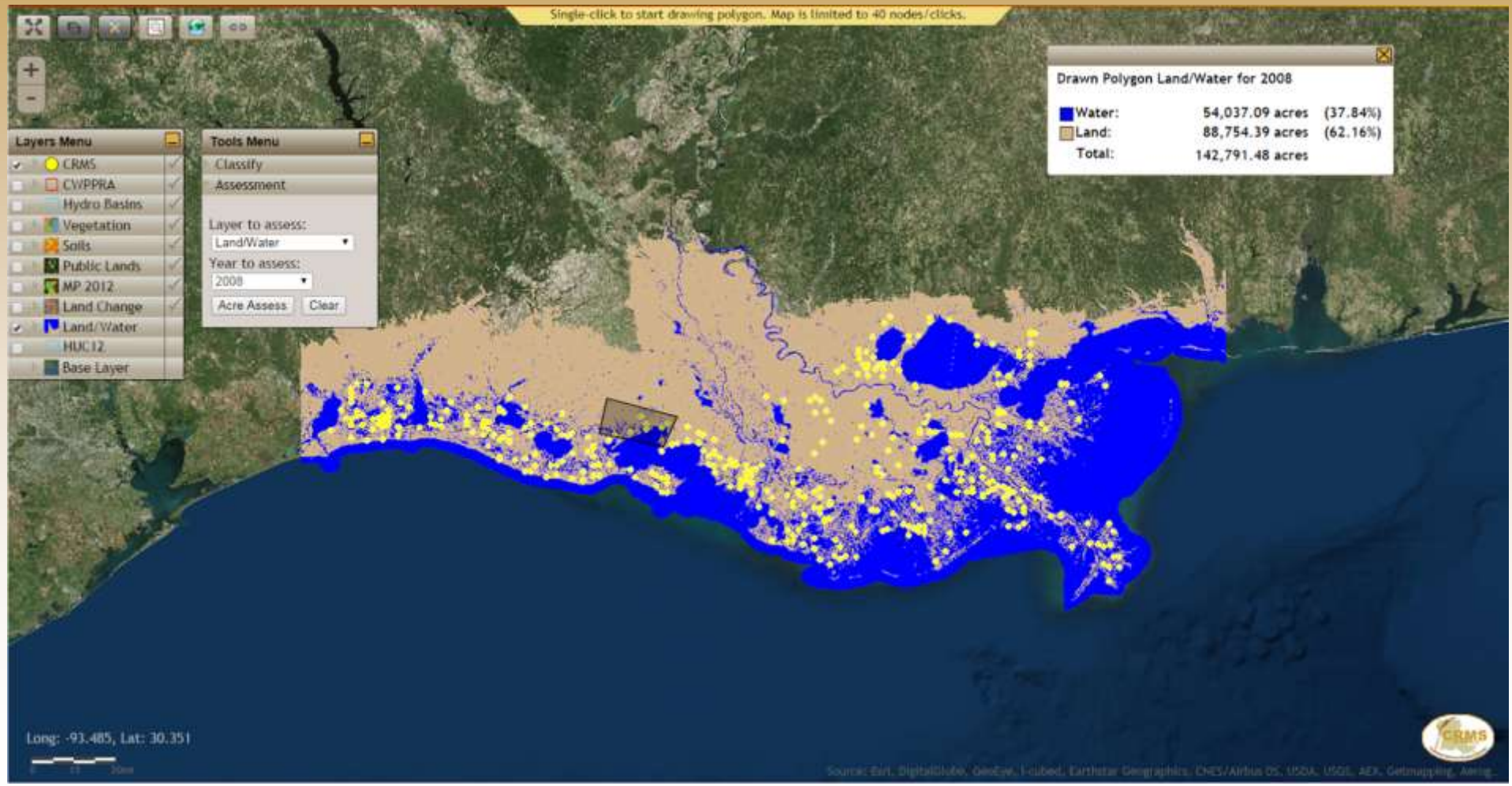

Questions?

http://www.lacoast.gov/crms

piazzas@usgs.gov